

**After Discharge From Hospital, Where Do We Go?  
Follow-Up Of Clients With Mental Illness And/Or Addiction:  
30 Days Post-Acute Care**

**Elsa M. Felker**

B.A. C&YC, University of Victoria, 1995

Thesis Submitted In Partial Fulfillment Of  
The Requirements For The Degree Of  
Master Of Social Work

University of Northern British Columbia

August 2008

© Elsa M. Felker, 2008



Library and  
Archives Canada

Published Heritage  
Branch

395 Wellington Street  
Ottawa ON K1A 0N4  
Canada

Bibliothèque et  
Archives Canada

Direction du  
Patrimoine de l'édition

395, rue Wellington  
Ottawa ON K1A 0N4  
Canada

*Your file    Votre référence*  
*ISBN: 978-0-494-48765-5*  
*Our file    Notre référence*  
*ISBN: 978-0-494-48765-5*

**NOTICE:**

The author has granted a non-exclusive license allowing Library and Archives Canada to reproduce, publish, archive, preserve, conserve, communicate to the public by telecommunication or on the Internet, loan, distribute and sell theses worldwide, for commercial or non-commercial purposes, in microform, paper, electronic and/or any other formats.

The author retains copyright ownership and moral rights in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

**AVIS:**

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque et Archives Canada de reproduire, publier, archiver, sauvegarder, conserver, transmettre au public par télécommunication ou par l'Internet, prêter, distribuer et vendre des thèses partout dans le monde, à des fins commerciales ou autres, sur support microforme, papier, électronique et/ou autres formats.

L'auteur conserve la propriété du droit d'auteur et des droits moraux qui protègent cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

---

In compliance with the Canadian Privacy Act some supporting forms may have been removed from this thesis.

Conformément à la loi canadienne sur la protection de la vie privée, quelques formulaires secondaires ont été enlevés de cette thèse.

While these forms may be included in the document page count, their removal does not represent any loss of content from the thesis.

Bien que ces formulaires aient inclus dans la pagination, il n'y aura aucun contenu manquant.

## Abstract

This retrospective descriptive research explores post-acute hospital follow-up for individuals with mental illness and/or addiction diagnosed in the Thompson Cariboo Shuswap Health Service Area in 2004/2005. The study examines follow-up rates determined by Performance Measure 5.1 and their differences as a function of other factors including diagnostic categories, Local Health Area hospitals, types of follow-up and number of separations. Data gathered from information systems in acute care hospitals, community mental health and addictions centres, and physicians' service billings of Medical Services Plan demonstrated an average of 75.9% follow-up. Variations occur between types of community follow-up and diagnostic categories. Findings indicate individuals diagnosed with substance use disorders have less follow-up; whereas individuals with psychosis, bipolar disorder, anxiety disorders, depression, and disorders with early onset have more follow-up. These implications direct suggestions for post-acute discharge follow-up procedures and areas for further research.

## TABLE OF CONTENTS

Abstract .....	ii
Table of Contents .....	iii
List of Tables .....	vi
List of Figures .....	vii
Dedication .....	viii
Acknowledgement .....	ix
CHAPTER ONE .....	1
Introduction .....	1
CHAPTER TWO .....	5
Literature Review .....	5
Prevalence of Mental Illness and/or Addiction .....	6
Definitions of the Seven Diagnostic Categories for Mental Illness and Addiction .....	8
Evolution of Mental Health Systems and Services in Canada .....	15
Changes in Practice and Services .....	17
Reasons for Absence of Follow-up .....	20
Hospital Utilization, Discharge, and Community Services .....	24
Concurrent Conditions and Treatment .....	28
Post Acute Follow-up Considerations .....	30
Follow-up Treatment .....	34
Gender and Affective Influences on Treatment Follow-up .....	36
Relevance and Rationale for Post Hospital Services .....	40
CHAPTER THREE .....	43
Methodology .....	43
Introduction .....	43
Statement of Purpose .....	43
Research Questions and Rationale .....	44
Contribution of Research Study .....	45
Theoretical Paradigm and Design .....	46
Research Sample .....	49
Health Service Area .....	49
Health Service Area Information Systems .....	50
Measures .....	52
History of Performance Measures, and British Columbia's Ministry of Health Goals and Performance Targets .....	52
Performance Measures for Mental Health and Addiction Services .....	54

Research Plan and Data.....	56
Data Information Systems.....	57
Ethics Approval .....	59
Procedures.....	60
Analysis.....	61
Data Limitations.....	61
Summary.....	66
 CHAPTER FOUR.....	 67
Results.....	67
Frequencies .....	67
1. Overall Sample Size.....	68
2. Overall Follow-up in Thompson Cariboo Shuswap, Sample Size and Follow-up.....	68
3. Broad Diagnostic Categories .....	69
4. Type of Follow-up .....	70
5. Local Health Area .....	71
Comparisons of Groups .....	74
1. Broad Diagnostic Categories versus Follow-up .....	75
2. Type of Service versus Follow-up .....	76
a). Medical Service Plan (MSP) Follow-up .....	76
b). Psychiatrist Only Follow-up .....	80
c). Physician Only Follow-up.....	81
d). Mental Health Centre Follow-up .....	83
3. Local Health Areas, Diagnostic Categories and Follow-up.....	84
4. Number of Separations versus Follow-up.....	87
Multiple and Single Separations by Diagnostic Categories.....	89
Multiple and Single Separations by Type of Follow-up.....	91
Summary .....	92
 CHAPTER FIVE .....	 94
Implications and Significance.....	94
1. Enhanced Discharge Follow-up.....	94
Performance Measure and Frequencies of Non Follow-up .....	94
Broad Diagnostic Groups.....	96
Hospital Separations and Multiple Admissions.....	103
2. Accessible Community Outreach with Follow-up Services .....	107
Type of Follow-up .....	108
Comparison within MSP Follow-up .....	110
Hospitals and Follow-up Frequencies.....	111
Local Health Areas .....	113
3. Improving Information and Data Collection Systems .....	115
Concluding Comments.....	118
 REFERENCES .....	 120

Appendix.....	132
Glossary	
Appendix B .....	137
Broad Diagnostic Categories and International Statistical Classification of Diseases and Related Health Problems (ICD Codes)	
Appendix C .....	143
University of Northern British Columbia's Ethics Approval	
Appendix D.....	145
Broad Diagnostic Categories versus Follow-up for Specific Hospitals	

## List of Tables

Table 1. Broad Diagnostic Categories and Follow-up.....	76
Table 2. Broad Diagnostic Category and Type of Follow-up.....	79
Table 3. Local Health Area versus Broad Diagnostic Category.....	85
Table 4. Local Health Area versus Follow-up.....	86
Table 5. Frequency of Separation by Diagnostic Categories.....	91
Table 6. Single and Multiple Separations by Type of Follow-up.....	92

## List of Figures

Figure 1. British Columbia Health Authorities .....	50
Figure 2. Diagnostic Broad Categories .....	70
Figure 3. Hospital Separations and Local Health Areas (LHAs).....	72
Figure 4. Sample Size (Separations) by Hospital .....	74
Figure 5. Psychiatrist Only Follow-up.....	81
Figure 6. Physician Only Follow-up.....	82
Figure 7. Separation (one time only) by Local Health Area.....	88
Figure 8. Separation (one time only) by Broad Diagnostic Category.....	89
Figure 9. Broad Diagnostic Categories for Clients Discharged from Royal Inland Hospital. ....	147
Figure 10. Broad Diagnostic Categories for Clients Discharged from Cariboo Memorial Hospital. ....	148



## Dedication

This thesis is dedicated to my children, Dara-Mae and Kora-Mei. They supported and endured my five years as a graduate student while I travelled 600 kilometres each week to attend classes and worked full-time as a Team Leader for the Ministry of Children and Family Development, while their father worked out of town all week and commuted home on weekends.

It is crucial to acknowledge the many hours and days I was away from home to attend classes and study that kept me from their daily lives. My children remind me of the capacity of families to stretch beyond their limits while providing love, and supporting the cultivation of wisdom as being worth the tenacity of effort.

I also want to acknowledge my father, Ernest A. Felker, who gave me a final gift by dying in my presence on August 31, 2006 (age 93) in Columbia, South Carolina; for his life-long support of me in spirit and faith to persevere in the pursuit of my goals.

The overarching dedication is for this study to be a step in the process of helping individuals with mental illness and/or addiction and their families, with the hope that in the future, having an improved continuum of services will assist them to live fuller and richer lives.

## Acknowledgement

There are numerous people who played significant roles in providing support, encouragement and time during the creation and completion of this thesis and whom I would like to acknowledge.

This research would not have been possible without the support of the Interior Health Authority, Mental Health, and Addictions Services in the Thompson Cariboo Health Service Area. They obtained agreement from the Ministry of Health to gather the data for the study, provided access to their facilities and services during my practicum placement, as well as computers, statistical programs (SPSS), and library support which were all necessary to carry out this study.

I greatly appreciate the opportunity to have worked with Tertiary Mental Health Researcher Dr. Caili Wu to analyse the study data, as well as Tertiary Utilization Leader Maureen McKinley MSW, who supervised my practicum placement. I was thereby provided with the contextual knowledge of this study topic and understanding of its significance.

I wish to express appreciation to my faculty supervisor, Dr. Bruce Bidgood, for his expertise, as well as detailed recommendations and advice during the writing and completion of this thesis study. Thanks also to my committee members, Professors Dr. Cindy Hardy and Dr. Jill Grant, who offered valuable insight, critique, and patience while guiding me to the completion of the study.

A special thank-you to my Ministry for Children and Family Development team in Williams Lake: Dianne McHardy, Michael Lucas, Cherie Carter, Glen Viegas, Christine Armstrong-Smith, Susan White, Sue Hunt, Karen Quick, Bobbi Ardell, and Deborah Affleck. All provided encouragement and supported my studies while being flexible around my varied work schedule.

Heartfelt appreciation is also owed to my exceptional friends, Denise and Jerome Beauchamp and family for providing care and attention for Dara-Mae and Kora-Mei during my many drives to attend classes at the UNBC Campus in Prince George.

In conclusion, I acknowledge my husband Jim Campbell for his unreserved encouragement of my graduate studies over these years and his provision of love and attention to our children while I studied. Without his understanding, support, and wisdom I would not have achieved this accomplishment.

## CHAPTER ONE

### Introduction

The intent of this research study is to explore and examine community follow-up services (Performance Measure 5.1) for people in the Thompson Cariboo Shuswap who have experienced an acute mental illness and/or addictions event requiring hospitalization. The Performance Measure 5.1 recommends that acute care patients visit a physician, psychiatrist, or mental health clinician within 30 days of their discharge (Ministry of Health, 2005) (Appendix A). A Glossary of terms and key concepts can be found in Appendix A.

This research topic results from discussions with Mental Health and Addictions professionals about follow-up services that were or were not accessed by individuals after discharge from an acute care hospital for either psychiatric or addiction issues. A specific case underscores the importance of this topic area. In 2005, an adolescent had been discharged from the regional acute hospital psychiatric inpatient unit in the Thompson Cariboo Shuswap Health Area and returned to the community. The youth's guardians or service providers were not informed of the diagnosis, treatment interventions, or discharge plans for follow-up services, and as such, put the patient at risk. This youth's possible peril led to discussions about other cases in which community support services had not been involved in the discharge planning. Further, these discussions question why individuals are discharged from acute care hospitals more quickly now than they have been historically, as well as the rationale for 30-day follow-up services (E. Pletzer, personal communication, July

2005). This case reinforces the value of discharge planning and the continuity of mental illness and addiction services.

According to the Standing Senate Committee on Social Affairs, Science, and Technology Committee report “*Out of the Shadows at Last: Transforming Mental Health, Mental Illness and Addiction Services in Canada* (Kirby & Keon, 2006) one-fifth of the population of Canada will experience mental illness in their lifetime. Despite this considerable prevalence, Canada “currently has no national picture on the status of mental health” and “there is still a great deal about mental illness and how to improve mental health that we don’t understand” (Kirsh, Krupa, Horgan, Kelly, & Carr, 2005, p. 1).

Most mental illnesses and addictions, except extreme cases, are treated in the community or within the primary health care system (i.e., medical clinics) rather than hospitals. Mental health experts estimate that only one in 10 people with mental illness receive treatment in hospitals (Canadian Institute of Health Information, 2006). Providing a system of community follow-up services for individuals’ post-acute care is important because people are admitted to hospital only in the most extreme instances. Examining types and percentages of community follow-up is a relatively new area of study not yet examined in depth to evaluate current service utilization, or to project future needs for the future.

Canadian Institute for Health Information (CIHI), among other researchers, holds that Canada does not collect data on the prevalence of mental illness and/or addiction even though some groups, such as First Nations<sup>1</sup> people, are at higher risk

---

<sup>1</sup> The use of the term Aboriginal or First Nations in this document applies to individuals or groups who would identify as Aboriginal, Métis or First Nations, status and non-status.

for mental illness than the general population (CIHI, 2006; Kirby & Keon, 2006; Kirsh et al., 2005).

Combinations of diagnostic categories, cultural preferences, age, gender, and other demographics may lead to varying levels of follow-up services. Kirby and Keon (2006) acknowledge that mental health researchers in Canada show there is a high amount of co-morbidity because individuals diagnosed with mental illness can also present substance use issues as the primary diagnosis.

This study focuses on the Thompson Cariboo Shuswap Health Service Area of the Interior Health Authority in British Columbia with the goal of providing information to develop a continuum of post discharge services, which is an essential component of Best Practices (Health Canada, 1998). The Province of British Columbia's Ministry of Health Performance Agreements require Regional Health Authorities to achieve increasing percentages of follow-up because a high proportion of community services and physician follow-up indicates a well-coordinated, accessible continuum of care for people with a mental illness or addiction diagnosis who have experienced an acute care hospitalization for their illness.

The acute care hospital discharge data in this study use seven mental illness diagnostic groupings based on International Classification of Diseases (ICD) codes (World Health Organization, 1994/2006): psychoses and bipolar disorders, anxiety disorders, depression, and disorders with early onset, developmental, and organic (brain) disorders, eating disorders, personality disorders, substance use disorders, and other mental health problems.

The hospital data system uses ICD codes determined by the treating physician to provide categories of mental illness or addiction treated in the hospital. The ICD codes are divided into seven broad diagnostic categories by Ministry of Health. Information from the World Health Organization (1994/2006) conveys that shortlists are created by hospitals because the 298 ICD 10 codes are considered too extensive when producing statistics. The analysis is descriptive of follow-up rates as a function of: diagnostic groups, local health areas, inpatient hospitals, and community follow-up service providers.

Effective discharge planning between acute hospitals and community services is critical to improve outcomes for people with mental illnesses and/or addictions disorders. Research shows that people with mental illnesses who do not receive follow-up community services see physicians twice as often for unnecessary health care compared to people receiving mental illness treatment (Borus & Olendzki, 1985; Lechnyr, 1992). Statistical information about post-discharge service utilization by individuals experiencing acute mental illness and addiction assists in understanding the Performance Measure 5.1 and recommendations for areas of further research and inquiry.

## CHAPTER TWO

### Literature Review

This research focuses on the Ministry of Health's Performance Measure 5.1, which is part of the annual Performance Agreements signed by Health Authorities in British Columbia (Ministry of Health, 2003/04). The study explores and describes subsequent community services follow-up in the Thompson Cariboo Shuswap Health Service Area for people ages 15 to 64 years who experience an acute mental illness or addiction event requiring hospitalization. The research data are limited to three types of community follow-up: physician, psychiatrist, and Interior Health Authority (IHA) mental health and addictions centres.

Professionals who provide services in (IHA) Mental Health Centre's include social workers, occupational therapists, nurses, psychologists and life skills workers with a priority to "assist people with serious and persistent mental illness and/or substance use and those at risk of developing serious mental health problems" (Interior Health, 2005, p.1). The goal is to help their clients "achieve emotional and psychological well-being and prevent or over-come disabilities associated with mental illness and substance abuse" (Interior Health, 2005, p.1). Acknowledging that community options for mental illnesses and addictions counselling are extensive and varied depending on individual preferences and available services, these three options were chosen as they are included in Performance Measure 5.1.

The research explores the percentages of follow-up for the seven diagnostic categories and looks at the types of community follow-up occurring in each of the nine Thompson Cariboo Shuswap local health areas. A review of literature located

articles providing overall or summary community follow-up percentages for patients following acute care hospitalizations; however, no articles were located examining the amount of follow-up by mental illness or addictions diagnostic category groupings, or variances between communities. The data provided for this study do not contain information on gender, age or cultural or ethnic background; yet, these variables could be useful for future research.

Language used to identify individuals experiencing mental illness and/or addiction disorders should be respectful, and not be indicative of societal stigmatization and discrimination. Canadian researchers Goldner, Tompkins, and Cardiff point out there is minimal consensus on which term is most appropriate for these individuals (2001). According to the people surveyed, the term *patient* was preferred by the majority of participants, and *client* was second for both recipients and providers. The terms *consumer* and *survivor* were preferred by a small proportion of the respondents of the study (Goldner et al., 2001). In light of this information, this document uses the term *individual* or *client* when referring to people receiving services in the community, and the term *patient* when describing people who are hospitalized.

### *Prevalence of Mental Illness and/or Addiction*

Health Canada's Report (2002) states that the chance of having a mental illness occur in a person's lifetime is 20 %, and that 80 % of families will be impacted by a mental illness through family, relatives, or friends. Mental illness is a disease condition defined as "characterized by alterations in thinking, mood, or behaviour or some combination thereof associated with significant distress and



impaired functioning” (Government of Canada, 2006, p. 2). Addictions are substance use defined by Diagnostic and statistical manual of mental disorder text revision (DSM-IV-TR) (APA, 2000) as “characterized by the presence of at least one specific symptom indicating that substance use has interfered with the person’s life (Sadock & Sadock, 2003, p.382). At any given time, 10.4 % of Canadians experience symptoms of mental illness (Mood Disorders Society of Canada, 2007). According to a 2002 Statistics Canada report, that one out of 10 people over the age of 15, or approximately 2.7 million people in Canada, disclosed symptoms “consistent with a mood or anxiety disorder, or alcohol or illicit drug dependence” (Government of Canada, 2006, p. 30). The experience of mental illness impacts all ages. Waddell, McEwan, Hua, and Shepherd (2002) confirm that “approximately one in five children and youth (200,000 in British Columbia) suffer from mental illnesses serious enough to cause significant distress and impair their development and functioning at home, at school, with peers or in the community” (p. 5). If the mental illness of children and youth is not detected or treated early, long-term costs and impacts to communities, families and the youth considerably increase as they become adults. Goldner et al. (2001) state that approximately three percent of adult Canadians have mental disorders that result in disability requiring intensive mental health services. They emphasize that “mental illness creates a profound burden of illness, causing suffering, disability, hospitalization and suicide worldwide” (2001, p. 6). The World Health Organization recognizes this significance, stating that “mental illness is one of the largest contributors to disability worldwide” (Goldner et al., 2001, p. 6).

### *Definitions of the Seven Diagnostic Categories for Mental Illness and Addiction*

The following seven mental illness and addiction diagnostic categories were developed by grouping the International Statistical Classification of Diseases (ICD codes) into seven broad categories. The sub-types of mental illness and substance use are identified for each diagnostic category as well as the prevalence for each in the general population. The seven diagnostic category groups include 117 ICD codes (Appendix B) yet, it is beyond the scope of this research to fully describe and explore the range of symptoms, effects and prevalence of each of these mental illness and addiction within the diagnostic groups.

#### *1. Anxiety Disorders, Depression and Disorders with Early Onset.*

Anxiety disorders are the most common form of mental illness, are more prevalent with women than men, and may occur any age (Health Canada, 2002). The effects of anxiety disorders extend from mild to severe and, in any given year, approximately 12 % of the general population is affected; approximately 9 % of men and 16 % of women (Health Canada, 2002). Individuals with anxiety disorders routinely avoid formal mental health services which, may impact their developing secondary disorders such as depression and the use of drugs and alcohol (Health Canada, 2002). ICD codes include panic disorders, mixed anxiety and depressive disorder, specified and unspecified anxiety disorders, and other dissociative disorders (Appendix B).

Sadock and Sadock (2003) define depression as the “psychopathological feeling of sadness” (p. 281). Estimates of the lifetime risk of having an episode of major depression are approximately 12 % for men and 25 % for women (Goldner et

al., 2001). Studies indicate approximately 8 % of adults will experience a major depression each year. Depression is currently the fourth leading cause of “lived disabilities” and premature death in the world (Health Canada, 2002, p. 31). It is predicted that depression will become the second leading cause of disability (after heart disease) in the world by 2020 (Mood Disorders Society of Canada, 2007). Additionally, 50 % of individuals who experience an episode of major depression will go through a recurrence (Health Canada, 2002). Onset of depression is typically in adolescence or early adult years, but may occur at any time during the lifespan. If treated, 80 % respond well to treatment, but almost 90 % of people who experience depression never seek treatment (Mood Disorders Society of Canada, 2007). ICD codes include range of depression from mild, moderate to severe including recurrent depressive disorder with psychotic symptoms, dysthymia, and mood disorders (Appendix B).

ICD codes for early onset include childhood autism, conduct disorder, oppositional defiant disorder, elective mutism, and reactive attachment disorder (Appendix B). According to Andrews, Goldner, Parikh, and Bilsker (2000) conduct disorder can be present in six percent of adolescent boys and two percent of adolescent girls, and is typically treated in child and youth mental health centres. Environment factors such as abuse and neglect can contribute to conduct disorders as well as genetic factors and presence of attention deficit/hyperactivity disorder (ADHD). Autism and pervasive developmental disorders are estimated to occur in between one in 150 and one in 500 children (NICHCY, 2007). Oppositional defiant disorder (ODD) consists of “associated features and disorders [that] can vary as a

function of the individual's age and the severity of the oppositional defiant disorder" (American Psychiatric Association (APA), 2000, p. 101). This disorder is found with children but numbers increases with age and is more common with males prior to puberty and both genders after puberty (APA, 2000). Elective mutism is found in "fewer than 1% of individuals seen in mental health settings" (APA, 2000, p. 126). Onset is typically before the age of five and the required feature is persistent failure to speak in social situations (APA, 2000). Reactive attachment disorder also occurs before the age of five and "is markedly disturbed and developmentally inappropriate social relatedness" (APA, 2000, p.127).

## 2. *Developmental and Organic (Brain) Disorders.*

Organic disorders occur at any age, but are most prevalent in the elderly and include dementia, Alzheimer's, delirium, and amnesia because they "feature as a cardinal symptom an impairment in important functions such as memory, language, or attention" (Stuart & Laraia, 2001, p. 462). Burn, Davies, McKenzie, and Brothwell (1993) found that of people admitted to hospitals for psychiatric illness in 1987, 9 % had organic brain syndromes (Cooper, 1987). Statistics Canada (1999) reports that 65 % of seniors who moved to health care facilities in 1994/95 experienced "stroke or Alzheimer's disease or other dementia," whereas only "8% of seniors who remained in private households reported a new diagnosis of these chronic conditions in 1996/97" (p. 1). ICD codes include dementia, and other mental disorders due to brain damage and dysfunction, and to physical disease.

### *3. Eating Disorders*

This diagnostic disorder includes the two sub-specific diagnoses of anorexia nervosa and bulimia nervosa, and are “characterized by severe disturbances in eating behaviour” (APA, 2000, p. 583). Anorexia is self-deprivation of food, whereas bulimia is eating, then vomiting, taking laxatives, or engaging in excessive exercise. Eating disorders are more prevalent among women than men and “carry a high risk of other mental and physical illnesses that can lead to death” (Health Canada, 2002, p. 79). Estimates show that 10 % to 20 % of people with eating disorders eventually die from the effects (Health Canada, 2002). Statistics Canada (1999) reports that 0.5% of Canadians age 15 years and over have been diagnosed with an eating disorder, and Health Canada (2002) estimates 3 % of women and 0.3 % of men will have an eating disorder in their lifetime, and binge eating disorders are present in two percent of the population. ICD codes include anorexia and bulimia nervosa, and other eating disorders (Appendix B).

### *4. Personality Disorders*

Personality disorders are a diagnosis defined as “an enduring pattern of inner experience and behaviour that deviates markedly from the expectations of the individual’s culture, is pervasive and inflexible, has an onset in adolescence or early adulthood, is stable over time and leads to distress or impairment” (APA, 2000, p. 685). Types of personality disorders included in ICD codes (Appendix B) are dissocial, emotionally unstable, dependent, and personality disorder unspecified. There are limited data on the prevalence of personality disorders; however, United

States health care data state that personality disorders could occur in between 6 % and 9 % of the general population (Health Canada, 2002).

The highest numbers of hospital admissions for people with personality disorders are between the ages 15 to 44, with more admissions for women than men (Health Canada, 2002). Women are more frequently diagnosed with borderline personality disorder and associated suicidal behaviours than men, resulting in hospitalization (Poole et al., 1997). Generally, people with personality disorders are treated in community settings; however, the social stigma attached to this type of disorder and the consequential self-denial creates a lower compliance with treatment follow-through (Health Canada, 2002).

#### 5. *Psychosis and Bipolar Disorders.*

This diagnostic group consists of psychotic disorders including schizophrenia and bipolar disorders. Often psychotic disorders vary in length of symptoms and cause. The ICD codes (Appendix B) contained in this grouping include schizophrenia, delusional disorder, schizoaffective disorder, psychotic disorders, hypomania, and bipolar affective disorders. Features of psychosis include “hallucinations, delusions, as well as other disorganized speech and grossly disorganized or catatonic behaviour” (Munson, 2001, p. 152) and individuals may also have “loss of ego boundaries” and “gross impairment of reality testing” (p. 152). People with psychosis demonstrate evidence of regressive behaviour, reduced insight, and/or personality disintegration (Stuart & Laraia, 2001). Included in psychosis is schizophrenia which is, a “disorder that lasts for at least six months and includes at least one month of active-phase symptoms (i.e., two [or more] of the following:

delusions, hallucinations, disorganized speech, grossly disorganized or catatonic behaviour, negative symptoms)” (APA, 2000, p. 298). Schizophrenia subtypes include paranoid, disorganized, catatonic, undifferentiated, and residual (APA, 2000).

There is lack of adequate information about the prevalence or gender ratios of psychotic disorders, although Andrews et al. (2000) estimate that schizophrenia is present in one percent of Canadians. Statistics Canada identifies that in 2001-2002 there were 50,438 hospitalizations in Canada for affective psychosis (Statistics Canada, 2001-2002). Psychotic disorders such as schizophrenia seem most likely to develop during adolescence or early adulthood (Health Canada, 2002). Schizophrenia and psychosis can be treated to achieve remission, but in the majority of cases “residual symptoms occur with varying severity” (Andrews et al., 2000, p. 319). Mental health services typically treat the most severely ill, and acute episodes require hospitalization, with more frequency in early adulthood (Davis, 2006; Health Canada, 2002).

Bipolar disorders are categorized as psychotic disorders, and described as a “cyclic disorder characterized by mood disturbances with episodes of mania, depression, or mixed episodes” (Andrews, Goldner, Parikh, & Bilsker, 2000, p. 196). The Canadian Institute for Health Information (CIHI) reported in 2002/03 that hospital separations for bipolar disorders were highest for people from 40 to 49 years, with statistically more hospital admissions for females than males for this disorder (CIHI, 2005a).

Some symptoms of bipolar disorders include a loss of insight, which can result in resistance to counselling (Health Canada, 2002). Bipolar disorder is treatable, but

it “takes several episodes for individuals to acknowledge and accept their diagnosis and to accept the need for treatment and early intervention strategies” (Andrews et al., 2000, p. 205). Community intervention may not reduce the “severity or duration of a manic episode” but a hospital admission may reduce the “problem behaviours” that occur (Andrews et al., 2000, p. 205).

#### 6. *Substance Use Disorders.*

DSM IV TR (2000) states that substance-related disorders “include disorders related to taking of a drug of abuse (including alcohol), to the side effects of a medication, and to toxin exposure” (APA, p. 191). There are 34 ICD codes for this diagnostic group including mental and behavioural disorders due to use of alcohol, opioids, cannabinoids, sedatives, cocaine, other stimulants, hallucinogens, multiple drug use and other psychoactive substances (Appendix B). The American Psychiatric Association (APA) and the World Health Organization (WHO) have worked together to make the DSM IV TR codes correspond to the WHO’s codes (American Psychiatric Publishing, 2008).

Statistics Canada (2004) surveys report that “3% of adults aged 15 years and over reported symptoms that met the criteria for substance dependence: 2.6% for alcohol and 0.8% for illicit drugs” (Government of Canada, 2006, p. 135). A United States national survey (2005) reveals between 50-75 % of people with substance use disorders are affected by mental illness, and between 20-50 % of people with mental illness also have substance use disorders (United States Department of Health and Human Sciences). The results from this survey reveal that more people primarily diagnosed with substance use have mental illnesses, whereas conversely, those



individuals with a primary diagnosis of mental illness have a slightly lower percentage of substance use. According to the Concurrent Disorders Ontario Network (2005), substance use disorders affect 24 % of people with anxiety disorders; 27 % with major depression; 47 % with schizophrenia; and 56% with bipolar disorder. Concurrent mental illness and substance use means both disorders require treatment, but treatment is not often provided simultaneously (McNamara, Schumacher, Milby, Wallace, & Usdan, 2001; Minkoff & Cline, 2004). Canadian statistics confirm that the majority of heavy alcohol consumption is by youth and young adults age 15 years and older, predominantly male, with 46.6 % of hospitalized men (note: primary diagnosis not identified) and 24.35 % of women identified as heavy drinkers (Government of Canada, 2006).

#### *7. Other Mental Health Problems.*

Other mental health problems include diagnostic codes that were not included in the other six diagnostic groupings. ICD codes for this category include delirium not induced by substance use, acute stress reaction, post-traumatic stress disorder, adjustment disorders, mental behavioural disorders associated with puerperium (complications of pregnancy and childbirth), factitious disorder, mental disorder not otherwise unspecified and unspecified disorientation (Appendix B).

#### *Evolution of Mental Health Systems and Services in Canada*

Historically, hospital stays for mental illness or addictions were lengthy, because medications were not effective and the lengths of stay were based on the antiquated concept of asylum care, which was the practice of warehousing people in large institutions (Goffman, 1961). Trattner (1999) in his book, *From Poor Law to*

*Welfare State* explains that during the time of asylum institutionalization the first post-acute care hospital follow-up study on patients with mental illness in North America occurred in 1905 as discussed below:

After care of the insane, or providing temporary assistance for people discharged from mental institutions, was not a new idea in 1905 when it was mentioned for the first time at the National Conference of Charities and Correction. Although widely used in Europe, especially in London and Paris, the plan had never been tried in America. Yet within a few years it became one of the most important features of work with the mentally ill. After hearing of the idea at the National Convention, Alexander Johnson of New York School of Philanthropy, and Homer Folks of New York Charities Aid Association, hired two social work students to investigate the condition of the patients discharged from the Manhattan State Mental Hospital during the previous three months. To their amazement, they discovered that about one-third of the patients could not be found, although so short a time had elapsed since their discharge. Of the remaining ones, it was discovered that some were doing well, some were in danger of relapse, and some were once again seriously disturbed. It appeared certain that some of the former patients would have benefited from suitable after care work at the time they were discharged. On the basis of this study and the belief that the social environment of patients could contribute to the prevention and cure of mental problems, a voluntary state wide after care system for the insane was launched in New York. (pp. 193-194)

Since North America introduced this concept over one hundred years ago, the trend toward providing post acute care hospital follow-up services in the community has continued. In Canada, mental health and addiction services have shifted from caring for people in large regional mental institutions, to recent trends of psychiatric deinstitutionalization and development of regionalized systems (Goldner et al., 2001). With the invention of more effective psychiatric medications and the slow shift toward deinstitutionalization, lengths of hospital stays have been slowly reducing and service delivery expectations have shifted from the hospital to the community (Davis, 2006). The organization of mental health and addiction services in the provinces has

changed to reflect this paradigm shift, as have the governance models (Goldner et al., 2001). Services and reorganizations have shifted responsibility for the delivery of mental health and addictions services from Provincial Ministries to health boards or councils so the management and evaluation of these services are delivered through local health authorities rather than through provincial systems (Goldner et al., 2001). This regionalized model of local health authorities provides a diversity of services and supports for a wide range of mental illness and addiction symptoms, as well as access and accountability for crisis intervention (Goldner et al., 2001). However, with each Province maintaining a different system and structure for providing mental illness and addiction services, the Standing Senate Committee on Social Affairs, Science and Technology (2006) recommends the need for a national mental health strategy. The Commission provides leadership for all levels of government between local, regional, provincial, to federal and national (Kirby & Keon, 2006). Further, on August 31, 2007, the Prime Minister of Canada launched the National Mental Health Commission to address mental health issues for Canadians dealing with mental illness.

#### *Changes in Practice and Services*

Sadock and Sadock (2003) report that the number of hospital admissions in the United States has been falling steadily each year since 1981. Admissions numbers and the average length of stay (ALOS) for psychiatric inpatients have been decreasing during the last decade, with the ALOS at psychiatric hospitals currently being 10 days. According to Sadock and Sadock (2003) there is a 57 % decrease in ALOS compared to the previous decade when it was 23 days. This change in ALOS

has been attributed to a philosophic shift from historic *curative goals* that aimed at reducing or controlling the addictions or mental illness disorders while the person was an inpatient, before they returned to the community (Sadock & Sadock, 2003).

With pharmaceutical improvements, as well as paradigm shifts in philosophy of treatment, hospitals now focus on *stabilization* to reduce the crisis and stabilize the mental illnesses, with the plan that the patient will receive follow-up services in the community, rather than staying in an acute medical institution. These shifts in medications, services, and philosophy are primary reasons for the reduced ALOS, because hospitals assume the client will continue their treatment after their discharge from acute care. Newer services like day-care hospitalization and community services help to achieve this goal (Sadock & Sadock, 2003). It is argued that not only the paradigm shifts support reduction in ALOS, but additionally, community treatment is a more viable alternative to reduce government expenditures for health care (Gagne, Dudgeon, & Kates, 2006; National Committee, 2005). The Abas et al. (2003) study in Auckland, New Zealand, confirms that service options are being created to reduce ALOS including early treatment interventions, assertive community treatment, day-care programs and rehabilitation services. Reasons for extended ALOS at hospitals for mental illness include a need for continued supervision, ongoing symptoms that did not respond to medications, and lack of suitable housing (Abas et al., 2003).

With the goal toward a reduction in number of hospital bed days, the American Health Care Quality report (2005) notes depression, bipolar disorder and schizophrenia remain the major mental illnesses for which hospitalization still occurs

(National Committee for Quality Assurance, 2005). An Interior Health Acute Care Utilization and Self-Sufficiency Report (2003) confirms the American finding, stating that, “over 70% of all bed days in Interior Health Psychiatry Units are related to bipolar disorder, major depression and schizophrenia” (Duncan, 2003, p. 3). Both of these reports focus on the mental illness and addiction inpatient diagnosis and utilization information. Neither report examines the percentage of community follow-up, nor makes recommendations for specific community follow-up services for the major mental illnesses resulting in hospitalization.

The paradigm shift in the treatment of mental illness and/or addictions has led to a focus on community services that could reduce hospital stays and subsequent re-admissions. Re-admissions can indicate that the treatment provided for individuals with acute mental illness and/or addictions did not stabilize their condition, or that community support was not provided. A review of literature reveals a lack of research into associations between reduced hospital stays and reasons for re-admission, as well as the connections between diagnostic categories and types of community follow-up for mental illness and/or addictions (Kirsh et al., 2005).

This gap in research information is substantial. The American “State of Health Care Quality” report (National Committee, 2005) confirms that mental health interventions decrease health care costs, when compared to untreated situations. The American study claims mental illness and/or addictions cost the United States approximately \$77.2 billion in lost income and affect approximately 57 million Americans (roughly 20% of the USA’s population). This high cost to society results in increased government interest in mental illness and/or addiction treatment and

outcomes, all of which require advancements in information technology for measurement (Lyons, Howard, O'Mahoney, & Lish, 1997).

The Performance Agreements between the British Columbia regional health authorities and the Ministry of Health are an example of governments evaluating health care services to determine accessibility and cost effectiveness of the services being delivered (Ministry of Health, 2005). Literature indicates that health goal initiatives are relevant to regional and provincial systems, as well as to international levels. Hader (1989) states that, in the late 1970s, the United States initiated a process of setting national health goals and objectives. The World Health Organization (WHO) also had a global objective of "health care for all by the year 2000" (p. 1). After the process was initiated, targets were set to measure "attainment of optimum health" (Hader, 1989, p. 1). The health care goals both federally and provincially aim to reduce costs and improve services and quality of life for individuals with mental illness and/or addiction.

#### *Reasons for Absence of Follow-up*

Research on Performance Measure 5.1 and the subsequent follow-up or absence of follow-up is relevant when examining mental health and addictions service delivery linkages between hospital and physician, psychiatrist, and/or mental health centre. The patient is discharged from the hospital with a referral for 30-day follow-up, and the success of this process may be influenced by agreements for service delivery between the hospital and community services. It is unknown what percentage of an individual's non-follow-up may be influenced by personal choice, socio-economic factors, cultural considerations, and community options (i.e., private

counsellors, non-profit societies and organizations). The Ministry of Health Performance Agreement (2005) offers four possible reasons why individuals may not access a physician, psychiatrist, or community mental health centre following an acute care hospitalization for a mental illness or addiction including:

1. There may not be a clinical need for follow-up.
2. Individuals may not show up for scheduled appointments, which may delay the follow-up with the result that it occurs after the 30 days.
3. Individuals may refuse follow-up care.
4. The resources may be inadequate to provide follow-up care within the 30 days. (Ministry of Health, Performance Agreement, 2005)

Background information to explain how MOH arrived at these four possibilities is not provided.

In addition to the four Ministry of Health reasons, the Director of Mental Health and Addiction Services suggests other factors could lead to incorrect statistical percentages about whether follow-up services are occurring, compared to their actual provision (J. F. Campbell, personal communication, January 12, 2006). These include:

1. A lack of technological capability because community mental health facility might not use a compatible computer system the Ministry of Health, even though the client is being provided service. According to the Interior Health Foundation Report (2003), the Medical Services Plan and CPIM data sets used to measure the performance targets may have variability in the clinicians' data recording, which reduces the accuracy of

information entered. As such, patient data is incompatible between systems.

2. The individual might decide to seek a private counselling service or attend a peer support program (e.g., Alcoholics Anonymous), neither of which provides data for the Ministry of Health (similar to MOH reason #1).
3. The Ministry of Health does not access the Addictions Information Management System (AIMS) data collected by contracted addictions services such as Detox Centres and Supportive Recovery facilities, or data from Native Friendship Centres; all of which are appropriate services for people with substance use problems following an acute care hospital stay. At the time of this study, the majority of AIMS data are collected through a paper system by the contracted addictions service providers and sent by mail to the Ministry of Health in Victoria. The Ministry of Health, Information Resource Management Department confirms that addictions service providers' compliance to provide this information is inconsistent provincially. Some health authorities have in-house addictions counsellors who enter client data on mental health information systems. However, the majority of addictions service providers in the British Columbia use the AIMS paper format, if they collect the data at all. After being sent to the Ministry of Health, the AIMS addictions information is entered into separate provincial computer system from Mental Health, and is not cross-referenced to measure the percentage of 30-day follow-up even though substance use disorders is one of the Acute Care Hospital



separation diagnostic categories. The Ministry of Health recognizes the current addictions data information gathering method is not sufficient and is developing an AIMS Minimum Reporting Requirements (MRR) system for Addictions Services similar to the MRR system developed for Community Mental Health Centres.

4. Some individuals are transient and reside out-of-province, so after having an acute care hospitalization in British Columbia, may receive their follow-up services in another province.
5. A further gap in data gathering is that the Ministry of Health cannot gather information about mental illness and/or addiction follow-up services provided on First Nations reserves as these are federally funded programs. As well, the Ministry of Health does not have the ability to calculate First Nations demographic differences in their performance measure data analysis.

A further consideration is that the Ministry of Health performance measures are based on people who actually receive acute care hospital services for their mental illness or addictions. The number however, may not be the total population of need. The greater number of individuals in the general community who require mental health or addictions services are not addressed in this data analysis, and are acknowledged as an area of future study (Lyons et al., 1997; Ministry of Health, 2005).

### *Hospital Utilization, Discharge, and Community Services*

An effective system of health care provides a continuum of care from diagnosis and treatment, to discharge, and follow-up (Health Systems Research, 1997; Kirsh et al., 2005). Research indicates that early and consistent follow-up after an initial onset of mental illness and addiction speeds recovery and enhances progress in treatment and rehabilitation, and can assist to reduce and prevent relapses (Andrews et al., 2000; Ministry of Health, PA, 2005). Simon Fraser University's Final Report on Mental Health, Mental Illness and Addiction (British Columbia, 2006) also recommends agencies reduce barriers to treatment by focusing on "providing services in normal community settings close to the population serviced, while hospital stays are as brief as possible, promptly arranged and used only when necessary" (p. 97). This balanced perspective is designed to encourage and promote a blend of approaches rather than have a conflict on perspectives about whether the community or the hospital is the preferred treatment location (Kirby & Keon, 2006).

Bellus et al. (2003) acknowledge that current economic and political pressures are to reduce psychiatric inpatient units and develop policies and procedures to increase community services. Madianos, Zacharakis, Tsitsa and Stefanis (1999), in their 1978-1993 Greek study, suggest that socioeconomic factors, which include social isolation, emigration, deprivation, and population density may have an effect on "geographical variation of rates of treated psychiatric illness in different parts of the world" (p. 477). They found that areas with poorer socioeconomic development had higher psychiatric hospital utilization, particularly for the diagnostic categories of schizophrenia and psychoses (Madianos et al., 1999). Furthermore, the study

suggests that cultural and religious beliefs may influence an individual's choice to not utilize mental health services.

Hospital utilization in Ontario for the treatment of alcohol abuse dropped 47% between the years 1974-1986 (Adrian, Ogborne, Rankin, Ferguson, & Jull, 1994). As hospitalizations decreased, the number of community-based programs for the treatment of alcohol problems increased, as did the number of persons who were treated (Adrian et al., 1994). In recognition of these shifts in service delivery, Glasby and Lester (2004) stress the relevance of evaluating the coordination of discharge planning between hospital and community through primary, secondary and tertiary services to provide accessible and affordable care. This coordination can be achieved through developing partnerships that uphold "trust and shared visions" (Glasby & Lester, 2004, p. 754) between levels of services for mental illness and addiction services.

Socioeconomic issues of poverty are relevant because they present an impediment to discharge due to patient housing needs and limitations on medical outpatient services (Glasby & Lester, 2004; Groveman, Nathan, Fagley, & Brown, 1986). Rosenfield (1993) agrees the majority of people with mental illness can be treated with outpatient services, and with therapeutic support can live productive lives. Before the shift from institutionalization they would have been hospitalized for extended periods. The issue of social supports and access to community services is paramount. Severely mentally ill or drug-addicted people are at a disadvantage as they often do not know how to access services that would benefit them. Rosenfield (1993) points toward a need for some form of public accountability to ensure mental

health services are accessible so individuals can participate productively at home, at work and in their community.

Groveman et al. (1986) confirm there are three primary predictors that increase ALOS for individuals with psychiatric disorders: suicidal behaviours, destruction of property, and homicidal threats. Treatment discharge plans were often deficient in identifying intervention strategies to diminish violent behaviours, particularly for females, as well as plans for financial assistance (Groveman et al., 1986). Bellus et al. (2003) report that individuals who are a danger to themselves are more likely to be kept in hospital (Gannon, Meagher, & Watters, 1997).

A Danish longitudinal study by Links (2005) finds a relationship between high suicide risk and hospital discharge without follow-up. Prevention efforts through community services during the first week of discharge reduced the risk of suicide by up to 2.1 % for males and 3.8 % for females. Harman, Cuffel and Kelleher (2004) also support the premise that there can be an improvement in cost effectiveness for health care by shifting the allocation of resources from acute care hospital settings to outpatient community care services.

While agreeing with the philosophic premise that community programs are a preferred model, no articles were located that specified what programs would prevent hospital admissions by diagnostic categories. Conversely, there was information on the number of hospital days for patients with various acute mental illnesses or addictions. ALOS can increase costs to health care, is also compounded by treatment procedures and resulting post acute hospital or community care. People with depression, schizophrenia, and bipolar disorder tend to have the most expensive

psychiatric hospital treatments (Harman et al., 2004). Yet, the ALOS were found to be reduced for individuals with depression, schizophrenia, and bipolar disorders when they also received a secondary diagnosis of substance use (Harman et al., 2004). However, the variability in ALOS for individuals with depression, schizophrenia and bipolar disorders are attributed to the hospitals and treating physicians. During the period of the Greek study (1991) there was a declining trend in the number of mental illness and substance use cases reported and a statistically significant pattern of hospitals discharging patients who had co-morbidity, inclusive of drug dependence and schizophrenic or psychoses diagnoses. The study also determines that the number of psychiatrists and mental health professionals does not influence the amount of discharges. Rather, the number of psychiatric beds and psychosocial rehabilitation services per 100,000 population were more predictive of the amount of discharges (Madianos et al., 1999).

Other considerations for follow-up and ALOS include limited physician resources and workload issues, as well as personal factors that may or may not lead to follow-up due to mental illness and addiction (Daley and Zuckoff, 1999). Studies on individuals with dual diagnosis with substance use or dependency and schizophrenia or major mood disorders show that over 60 % had minimal success with abstinence or taking their psychiatric medications, resulting in their return to the hospital (Daley & Zuckoff, 1999, p.43). Daley and Zuckoff (1999) conclude that previously hospitalized psychiatric patients who do not attend an initial follow-up session at a community outpatient program are at high risk for rehospitalization. High-risk behaviours, low self-esteem, feelings of hopelessness, and poor judgement

are reasons for low compliance, with the potential result being a cycle of crisis, relapse, and hospitalization. Community interventions could circumvent this cycle by assisting the individual “to accept, live with and manage the persistent symptoms of illness[mental illness and addiction disorders] that may wax and wane over time” (Daley & Zuckoff, 1999, p. 42).

### *Concurrent Conditions and Treatment*

Research by O’Toole, Strain, Wand, McCaul, & Barnhart confirmed that people actively abusing substances were “2.3 times as likely to use an emergency room and 6.7 times as likely to be hospitalized as drug nonusers” (2002, p. 334). O’Toole et al. (2002) emphasize that hospitals with psychiatric based services have challenges in effectively treating patients with substance use disorders. Glasby and Lester (2004) note that people admitted to hospitals for mental illnesses and addiction should only stay as long as necessary not only because of high health care costs but possible outcomes of patients experiencing depression and increased dependence on hospital services. The outcomes for extended ALOS could create institutional types of behaviours including an absence of personal motivation and healing, and reliance upon hospital staff to meet individual needs, rather than developing independent living skills (Glasby & Lester, 2004).

Services for individuals exhibiting dependence resulting from extended ALOS in the medical system may require coordination and integration to support the transition between the hospital and community services. Stigma and discrimination against individuals with mental illness and addiction impact a person’s ability to

maintain housing and jobs as well as seek out necessary services (Bolden & Wicks, 2005).

There are treatment challenges for people who have dual or concurrent diagnoses of mental illness and substance use because with a dual diagnosis, follow-up service depends on which disorder is being treated. As such, a dual diagnosis becomes a dual limitation with additional barriers for people who need to access treatment. Before regionalization in British Columbia, mental illness and addiction services were run by different branches of government. Clients with mental illnesses who were misusing substances could be told by their therapist to come back after three months of abstinence. Conversely, addictions clients with a mental illness were told by their addictions counsellors to come back after they had been assessed by their mental health worker and were on medication. For individuals with concurrent diagnoses, this dynamic between two systems could leave them in a gap between community services, resulting in their only access to services being acute care hospitals (J.F. Campbell, personal communication, January 12, 2006).

In addition to systemic issues, substance abusing individuals with psychiatric illness often present lower levels of follow-up due to the disorders, contributing to clinical deterioration over time (Daley & Zuckoff, 1999). Daley and Zuckoff (1999) refer to research studies showing individuals with substance use issues have a tendency to abandon treatment to negative outcomes, resulting in subsequent higher levels of care being required later on such as hospitalization. Despite challenges in treatment compliance, Daley and Zuckoff (1999) assert it is the responsibility of each agency to develop a philosophy and guideline to meet people's needs, rather than to

judge or blame the individuals grappling with their inability to conform to treatment. Treating chemically dependent people is challenging as substance use often masks mental illnesses. According to James and Gilliland (2001) drug abuse is seven times, and alcohol abuse is ten times, more prevalent in people with mental illness, making a notable challenge for care.

Community follow-up care that both plans for and provides dual treatment for people with both substance use and mental illness disorders has better results than exclusive diagnosis treatment plans (Ritsher, McKellar, Finney, Otilingam, & Moos, 2002). Timko, Chen, Sempel, and Barnett (2006) found that individuals who misuse substances have better outcomes when treatment is provided through the community rather than acute care hospitals. Furthermore, people who have hospital stays due to acute addictions use more expensive forms of community follow-up services. The complication for discharge planning for people with dual diagnosis is in developing the appropriate community treatment plan. Features predictive of readiness for substance use treatment include the individual's perception of the addiction and their "perceived loss, perceived coercion, and attribution of the medical condition to substance abuse" (O'Toole et al., 2002, p. 334).

#### *Post Acute Follow-up Considerations*

Increasing the percentage of follow-up after hospital discharge is a critical step to enhance treatment prognosis for people with mental illness and/or addictions (El-Mallakh et al., 2004; Byers & Cohen, 1979; Solomon, Davis, & Gordon 1984; Winston, Pardes, Papernick, & Breslin, 1977). A United States study revealed 50 % t



to 60 % initial follow-up after hospital discharge with a range of 13% to 90% (El-Mallakh et al., 2004).

The “most significant predictor of prompt rehospitalisation following psychiatric discharge is missing follow-up out-patient appointments” (El-Mallakh et al., 2004, p. 294). They found that the variables or predictors related to follow-up compliance include client vulnerability, community support or system responsiveness (El-Mallakh et al., 2004). Of these three predictors, system responsiveness (convenience of scheduling and proximity of location) is cited more frequently than vulnerability of individual and community support as a barrier to follow-up (Klinkenberg & Calsyn, 1996).

Vulnerability is defined by Klinkenberg and Calsyn (1996) as measurements relating to diagnoses, demographics, socioeconomic factors, interpersonal skills, and insight. Community supports include a person’s living environment, family, relatives and social support. Predictors for low follow-up correlate with diagnostic disorders, particularly when substance use is the primary diagnosis rather than secondary to the mental illness disorder (Allan, 1987). Individuals with little to no health insurance have the lowest rate of compliance for discharge follow-up services, whereas people who have psychiatric outpatient care prior to their hospital admission had higher proportions of follow-up (El-Mallakh et al., 2004).

Daley and Zuckoff (1998) report that low levels of compliance are particularly noteworthy when following up with treatment for co-morbid conditions of mental illness and substance use (Booth, Cook, & Blow, 1992; Carey & Carey, 1990; Matas, Staley, & Griffin, 1992). For some patients, reduced treatment

compliance leads to loss of social support networks, including family and friends, and mental illness relapse with a possible hospital re-admission (Daley & Zuckoff, 1998). Sorvaniemi and Hintikka (2005) find the majority of comorbid diagnoses are inclusive of individuals with a history of substance use and anxiety disorders. Characteristics of comorbid disorders typically include the presence of severe symptoms, suicide risk, decrease in percentage of recovery from episodic periods, functional impairment, and lower numbers of follow-up treatment (Sorvaniemi & Hintikka, 2005).

Bellus et al. (2003) utilize the social learning approach of Paul and Lentz (1977) to enable the successful return of severely psychiatrically disabled adults to the community. According to Albert Bandura social learning theory is an approach to learning that combines modeling, identification and human interactions (Sadock & Sadock, 2003). Results of Bellus et al.'s (2003) research confirm that individuals discharged from psychiatric hospitals who had access to social learning approaches demonstrated more success in accessing community services. The goals and values inherent in this technique incorporate "respect, dignity and self-determination" (Bellus et al., 2003, p. 41) and include partnership between the individuals, their clinicians, and the mental health and addiction community services.

After reviewing a number of studies, Daley and Zuckoff (1998) recommend the following interventions to support initial treatment compliance: telephone or mail reminders, increasing the frequency and intensity of services offered in the early phase of outpatient care, dual diagnoses programs, and provisions for positive reinforcements for participation in treatment activities (Agosti, Nunes, Stewart, &

Quitkin, 1991; Hochstadt & Trybulak, 1980; Kadden & Mauriello, 1991; Matas et al., 1992; Meichenbaum & Turk, 1987; Stark, Campbell & Brinkerhoff, 1990).

Another factor related to treatment follow-up compliance is the relationship between the service provider and client (Hermann & Mattke, 2004). Influential areas of this relational aspect include providing education on models of treatment, managing medication side effects, and the therapist's ability to deal with issues impacting a client's decision to continue treatment (Hermann & Mattke, 2004). The use of motivational therapy prior to hospital discharge, with a goal to coordinate the treatment with the client's needs and expressed concerns regarding services, increase initial community follow-up percentages by 35 % to 76 % for individuals with psychiatric and substance use disorders (Daley & Zuckoff, 1998). The amount of follow-up varies in this American study, but proves to be dependent upon socioeconomic conditions and availability of medical insurance to cover costs of follow-up services.

Effective discharge planning between acute hospitals and community services is critical to improve outcomes for persons with mental illness and/or addictions disorders (Kirsh et al., 2005). Research shows that people with mental illness who do not have a care plan for community services see physicians twice as often for unnecessary health care compared to people who have treatment plans (Lechnyr, 1992). Borus and Olendzki (1985) agree, writing that individuals diagnosed with severe mental illness disorders who do not receive post-discharge treatment have higher proportions of medical service usage compared to those who receive treatment.

Aligning mental health and addiction services between hospitals and community is important, given the preponderance of individuals with concurrent disorders in Canada. One in seven hospitalizations involve people diagnosed with both a mental illness or substance use (CIHI, 2006). In addition, mental illness is associated with one-third of the total number of days patients spent in Canadian hospitals (CIHI, 2006). Harman, Cuffel and Kelleher (2004) recommend that further research is needed on the relationship between diagnoses and ALOS, as well as on the correlations between discharge and re-admission rates. They state an imperative for hospitals is to measure their own performance against benchmarks of ALOS for patients with mental illness disorders, and to identify areas of discrepancy or inefficient practice (Harman, Cuffel, & Kelleher, 2004). In addition to understanding the factors that influence the reasons for hospital admissions, ALOS, and the numbers of discharges, it is also relevant to analyse the reasons people with mental illness and substance use access post-acute community services, and the types of community supports they find beneficial.

#### *Follow-up Treatment*

Shaffer (1991) suggests disease ideology (i.e. medical model) is widely applied particularly for studies on addictions (Johnson, 1986; Peters, 1984), but the practice is fading as evidence from other frameworks and theories are also proving successful (Marlatt, Barer, Donovan, & Kivlahan, 1988; Shaffer & Jones, 1989). The disease ideology and medical model is based on the traditional patient-physician relationship focusing on diagnosis and corresponding treatment. The medical model dominates psychiatric care and the resulting treatments include pharmacotherapy and

electroconvulsive therapy (Stuart & Laraia, 2001). Shaffer (1991) argues that the disease model is prescriptive, because the treatment and solution are predetermined, and as such Shaffer prefers a treatment model that is tailored to the individual. With the treatment model, the client's perception of their disorder determines where, when and what type of treatment they seek; as a result, the role of the therapist is to collaboratively facilitate this process (Shaffer, 1991). Similarly, holistic models emphasise the significance of the counselling relationship embracing connectedness between personal healing, community and environment (Naadmaadwin, 1999). Shaffer (1991) requests therapists consider that reality is determined by knowledge, rather than reality causing knowledge, meaning the theoretical approach towards mental illness treatment should not be based solely on "objective reality" as in positivism (Casti, 1989; Shaffer & Robbins).

Kloss and Lisman (2003) suggest that treatment for individuals with dual diagnoses of mental illness and/or addiction should encompass both disorders, and any medical model of intervention may be counter therapeutic. Milam and Ketcham's (1983) view of the medical model is that a client takes minimal responsibility because a person's heredity and physiology determines addiction. In this view, alcoholism is seen as an incurable inherent illness, where an individual needs to abstain from its use and seek therapeutic support. In summary, which theoretical model used to determine treatment options can influence the analysis of the situation and intervention options selected for follow-up, as potentially could the individual's culture and gender.

### *Gender and Affective Influences on Treatment Follow-up*

Vogel, Wade and Haake (2006) indicate that women are more receptive to the idea of seeking therapeutic support (Moller-Leimkuhler, 2002), whereas men may feel a greater sense of self-stigma resulting in feelings of failure, loss of control, and low self-esteem (Vogel et al., 2006). The Report on Alcohol and Other Drug Problems and B.C. Women (Poole et al., 1997) examines gender as it relates to client's diagnosis and subsequent impact on their decisions to access mental health counselling. The Poole report (1997) states that two-thirds of women who abuse substances also have mental illnesses such as depression, post-traumatic stress disorder, panic disorders, and eating disorders. Social factors contributing to substance use by women include family violence, isolation, discrimination, and inequity. Societal barriers for women accessing community addictions and mental health services consist of feelings of guilt, shame, depression, reservations surrounding confidentiality of information, economic barriers, fears of child apprehensions from child protection agencies, and coercive treatment (Poole et al., 1997). Cusack, Deane, Wilson, and Ciarochi (2006) disclose that, in general, men seek help less often than women. If men perceive treatment will be beneficial and have a connection or bond with the mental health professional, they will be more likely to attend counselling sessions. However, men who face challenges in emotional expression are likely to avoid counselling and the subsequent exploration of their feelings (Cusack et al., 2006).

Women and men, however, both experience feelings of self-blame and low esteem that complicate their treatment and add to their avoidance of follow-up

services. Perceived public interpretations that people with mental illness and addiction have behaviour problems pose challenges for people to ask for and follow-up with therapeutic interventions (Government of Canada, 2006). Research indicates that over two-thirds of people who would benefit from counselling avoid therapeutic support (Andrews, Issakidis, & Carter, 2001; Shaffer, Vogel, & Wei, 2006). Vogel, Wade and Hackler (2007) state the most frequent reason for not seeking counselling is the stigma associated with mental illness and its treatment. Only 11 % of individuals with diagnosable conditions actually seek out therapeutic counselling services (Vogel et al., 2007). Suffering from a mental illness or addiction carries public stigma for the individual, which constructs barriers to healthcare in a timely manner, resulting in overutilization of crisis and acute services (Health Canada, 2002). This scenario raises the question of whether individuals who have numerous repeat hospitalizations are reluctant to access community services or do not find them helpful. Barriers in accessing community services include whether there were negative experiences with the referral process for mental health and addiction services, costs, transportation difficulties, and/or scheduling arrangements (Lyons et al., 1997).

The role of self-stigma, which is devaluing personal self-worth needs to be considered because individuals may not only feel unaccepted by society, but by themselves as well, leading to decreased self-esteem and confidence and is indicative of premature withdrawal from treatment (Sirey et al., 2001; Vogel et al., 2007). Vogel et al. (2007) recommend that societal changes are needed to reduce stigma and self-stigma. Further counsellors should provide support to help individuals

understand and cope with the possible internalization of stigma. Education helps to normalize symptoms of mental illness and eventually aids in the reduction of stigmatization. Further more clients need counselling that is strength based rather than focused on personal deficits and blame. A framework minimizing the stigma and maximizing self worth will return value and quality to client's lives.

In addition to the barriers associated with social stigma and mental illness, Shaffer et al. (2006) discuss that "individuals with higher levels of attachment anxiety had greater intentions to seek counselling for psychological and interpersonal concerns" whereas "individuals with higher levels of both attachment anxiety and avoidance perceived greater risks from counselling" (p. 451). Attachment has a important role to play in seeking help because it provides an internal response on whether or not a person would decide to seek or avoid help. Adult attachment theory suggests people's cognitive processes regulate expectations of themselves and others in close relationships based on prior experiences (Shaffer et al., 2006). Two adult attachment dimensions are avoidance and anxiety, which "influence how individuals view themselves and others" (p.422). Counsellors aware of adult attachment theory and dimensions can adapt their intervention when entering into a therapeutic alliance with a client in order to minimize any barriers to follow-up that may occur (Shaffer et al., 2006). Manthei (2006) states there is minimal knowledge regarding reasons why individuals choose one type of counselling over another, except that people with positive attitudes towards counselling are more likely to seek help. According to Manthei (2006), the process for help seeking starts with the recognition that there is a problem. People who are "decisive, self-motivated, skilled and active participants in



resolving their difficulties” (p. 534) will frequently choose services that have benefited them in the past (Manthei, 2006). Then individuals would access social supports if informal services were not acceptable or accessible. If these self-found resources are proven to be ineffective, the last option for people is to choose professional services (Cramer, 1999; Norcross & Abooun, 1994; Sherbourne, 1988; Wivell & Webb, 1995).

The factors associated with discharge and service utilization are relevant to understand the dynamics of mental health services. Individual choice is impacted by culture and socioeconomic factors in choosing therapeutic support. Andrews et al. (2000) highlight cross-cultural issues that can also impact mental health delivery services because an “individual’s cultural background will affect the specific way in which he or she sees the environment and also how the individual might show his or her feelings, emotion, distress, or conflict in behaviour, thought or action” and that “culture will influence the experience of mental disorders and how they might present” (p. 46). Andrews et al. (2000) stress that when implementing models of mental illness treatment there should be respect, empathy, and preparation to understand the wider cultural context of the ethnicity of groups being served. Cultural and racial origins influence mental health because coping styles and social supports are culturally determined and also may be linked to issues of racism, discrimination and poverty (Bolden & Wicks, 2005; Government of Canada, 2006). Abe-Kim, Gong, and Takeuchi (2004) discuss the influence of spirituality and religion on help seeking activities for Filipino Americans. Their research concludes “spirituality was associated with lower stress and a lowered probability of seeking

help from mental health professionals, while religiosity was associated with a preference for seeking help from religious clergy” (Abe-Kim et al., 2004, p. 686). To further understand personal choice and enhance accessibility for 30-day follow-up it would be valuable to understand how culture influences help seeking.

### *Relevance and Rationale for Post Hospital Services*

The rationale behind achieving the goal of high percentages of follow-up is to promote for the patient a coordinated and accessible continuum of care services by physicians and community mental health teams. Hermann and Mattke (2004) find that re-admission to hospitals for mental illnesses or addictions often stem from “premature discharge” and “lack of coordination with outpatient care” (p.19). They conclude that high hospital re-admissions necessitate having hospital discharge procedures and community services evaluated to determine which “factors [are] associated with re-admission” (Hermann & Mattke et al., 2004, p. 19).

Sladden and Thomson (1999) recommend the implementation of policies and procedures to reduce the number of people who do not receive follow-up services after being discharged from acute care hospital for mental illness or substance use disorders. They found that when formal follow-up was planned and the clients were contacted by their clinicians to ensure they attended the session, 90% attended a general practitioner, psychiatrist, or community mental health team within 30 days. However, when no formal arrangements were made and clients were only advised to pursue follow-up services, significantly lower numbers of follow-up occurred, and the amount dropped to 68% for 30-day follow-up. The Sladden and Thomson (1999) study supports the Ministry of Health expectation that Health Authorities place

importance on providing post-acute care discharge follow-up linkages to the community for people with mental illness and substance use issues (British Columbia, 2005).

Waddell et al. (2002) recommend evidence-based approaches be used to increase access to programs and services and increase cost-effectiveness. Gagne, Dudgeon and Kates (2006) support the need to improve mental health care for Canadians and stress the high cost of illness impacting individuals, as well as the health care system. The risk of not pursuing health care reform is high and research indicates a “high co-morbidity rate between mental disorders and all serious disabling or life-threatening diseases, including cancer for both men and women” (Gagne et al., 2006, p. 29).

In addition to the need for hospital discharge planning to connect people to community services, the mental health and addiction system needs to connect with other community services to ensure accurate diagnosis and prevent hospital admission. However, accurate diagnosis is not always the case. In the *Journal of American Medical Association* Lechnyr (1993), “found that doctors failed to recognize or diagnose over half the cases of severe depression... whereas psychiatrists correctly diagnosed depression 86% of the time” (p. 22). Presenting an accurate diagnosis is critical for proper care. For example, depression accounts for a large number of hospital admissions, but treatable if diagnosed early (Bolden & Wicks, 2005; Lechnyr, 1993). Most people see their family physician when depressed rather than seek treatment at a hospital. A community mental health centre

offers a viable alternative for treatment (Andrews et al., 2000; Bolden & Wicks, 2005).

The coordination of treatment models and the consistency of the continuum of community mental health and addictions services are essential to support the use of community interventions and therapeutic supports. In consideration of the necessity and accessibility of post-acute hospital services, knowledge regarding types of service accessed and found to be useful would be beneficial for acute care discharge planning. The implications of this knowledge effect people's health and well-being, and mismatching services results in rising health care costs and an overall negative impact on society. The purpose and nature of this study is to explore and describe community follow-up (Performance Measure 5.1) for individuals with mental illness or addiction discharged from acute care hospitals in Thompson Cariboo Shuswap Health Service Area.

## CHAPTER THREE

### Methodology

#### *Introduction*

##### *Statement of Purpose*

The purpose of this research study is to investigate and examine follow-up services pertaining to Ministry of Health Performance Measure 5.1., including type of follow-up and corresponding proportions of hospital separations, diagnostic category groups, and location.

The Ministry of Health (2005) definition for Performance Measure 5.1 is:

The number of persons aged 15 to 64 years hospitalized for mental health and/or addictions diagnoses that received at least one contact with a community mental health centre, fee-for-service psychiatrist or general practitioner within 30 days of discharge as a percentage of the total number of persons aged 15 to 64 years hospitalized for mental health and/or addictions diagnoses. (Ministry of Health, Interior Health - Performance Agreement, 2005, p. 14).

Limited to Performance Measure 5.1 the study is thus, also limited to three types of follow-up. Nonetheless, there are other viable community services for individuals discharged from acute care hospitals for mental illness and addiction disorders.

Interior Health Authority Mental Health Centres provide a “wide range of mental health and addiction services in the community to help individuals achieve independence and improve the quality of their lives” (Interior Health Authority, 2005, p. 1). Services include programs such as psychiatric rehabilitation, cross cultural counselling, emergency response, alcohol and drug groups, adult short-term counselling, early psychosis intervention, and individual case management (Interior Health, 2005).

The seven diagnostic categories for the hospital separations occurring in the Thompson Cariboo Shuswap Health Service Area during fiscal year 2004/05 include:

1. Anxiety disorders, depression, and disorders with early onset
2. Developmental and organic (brain) disorders
3. Eating disorders
4. Personality disorders
5. Psychosis and bipolar disorders
6. Substance use disorders
7. Other mental health problems

#### *Research Questions and Rationale*

An expectation for the study is that client participation in the 30-day follow-up (Performance Measure 5.1) will vary in percentage and proportion with type of community follow-up, diagnostic category groupings, and local health area. The three research questions explored in this study are:

1. *What are the proportions of follow-up by Physicians, Psychiatrists, and Mental Health Centres?*

The analysis explores and describes the proportions and percentages of follow-up for physician, psychiatrist and mental health centre, as a function of single and multiple separations. The information provides statistical analysis on aggregate proportions of follow-up, but due to the data, cannot provide specific reasons why individuals chose to see a physician, psychiatrist, or mental health clinician.

2. *What is the type of 30 day follow-up services for each of the diagnostic category groupings?*

This question examines the proportions and types of follow-up for each of the seven diagnostic category groups. The literature review indicates varying response patterns, by service providers, depending on the diagnostic category. For example, Timko et al. (2006) find there are better outcomes for people with substance use when they access community interventions rather than acute care hospitals. Early and consistent follow-up after the onset of mental illness and/or addiction speeds recovery and enhances progress in treatment and rehabilitation (Lechnyr, 1993; Ministry of Health, 2005).

3. *What are the proportion and percentage of follow-up for individuals discharged from specific hospitals in Local Health Areas?*

The trends and patterns of follow-up in local health areas (LHA) will be described as a function of the specific hospitals and LHAs. An ideal health care service system provides a patient/client-centred continuum of care for people with mental illness and/or addictions. Meaningful statistical information about people who experience an acute care hospital stay due to a mental illness and/or addiction, and the type of follow-up occurring, assists in determining the current utilization of community services, as well as areas for further research.

*Contribution of Research Study*

This research provides a greater understanding of the scope and occurrence of 30-day follow-up services for acute mental illness and/or addiction in the Thompson Cariboo Shuswap area. The community services referred to in this study

are limited to physicians, psychiatrists, and Interior Health Authority community mental health centres because the data are based on Performance Measure 5.1.

A primary objective of this research study is to provide data, findings, and information analysis on the levels of post-acute care utilization resources to contribute to planning and service development. The analysis aims to identify:

1. Type of follow-up for Performance Measure 5.1.
2. Occurrence of major mental illness and/or addiction diagnoses of acute care discharges.
3. Proportion of follow-up in Local Health Areas.

This research study provides detailed information to help understand the percentage outcome provided by the Ministry of Health in its annual Performance Agreements with the Thompson Cariboo Shuswap Health Service Area of the Interior Health Authority.

### *Theoretical Paradigm and Design*

This research study is based on medical data, and utilizes quantitative analysis from a positivist theoretical perspective. Empirical data is based on observation, and is derived from hospital discharges and where follow-up services occur. The follow-up services measured are based on the Performance Agreement between the Ministry of Health and the Health Authorities, and as such, the end result is limited by the actual data entered by acute care hospitals, physicians, psychiatrists, and/or mental health centres.

This quantitative research design is an applied science model employing exploratory and descriptive analysis and Thyer (2002) maintains that positivist



empirical research methods are valuable for social sciences because the paradigm addresses social behaviours with a “strong evidence-based foundation” (p. 474). In defining positivism, Thyer (2002) prefers the definition by Rubin and Babbie (1997): “a paradigm introduced by August Comte which held that social worker’s behaviour could be studied and understood in a rational, scientific manner” (p. 6). Neuman (2003) states that positivism includes the following assumptions:

1. Reality is real, social reality is not random.
2. It is patterned and has order.
3. Basic observable laws of science are considered to be true.
4. Basic patterns of social reality are stable and knowledge of them is additive (p. 72).

Positivism employs research methodologies including quantitative data, statistics, exact measures, and structured objective research methods (Neuman, 2003; Rubin & Babbie, 2005). These key assumptions of positivism are met in this research because the data are based on the medical model criteria for ICD codes (World Health Organization, 1994/2006) supporting the premise that social reality is not random, but stable over time. Stuart and Laraia (2001) refer to the medical model as dominating psychiatric care while maintaining the traditional physician patient relationship. The primary focus is on diagnosis of a mental illness along with the subsequent treatment (Stuart & Laraia, 2001).

Data analysed for this research on Performance Measure 5.1 are retrospective because they were retrieved from the previous fiscal year by the Ministry of Health from the Medical Service Plan physician payment system and Interior Health Community Mental Health Centres’ information systems. Health performance indicators and measures are beneficial for evaluating services and research, and they

provide a standardized framework for territorial levels and national standards (Perrin and Koshel, 1997). Thommasen, Thommasen, Martiquet and Jin (2004) however, criticize the absence of health care data gathered at local and regional levels in British Columbia, especially regarding its cultural exclusivity exclusion of cultural factors. The indicators for Performance Measure 5.1. provides a standardized framework yet as pointed out by Thommasen et al. (2004) there is an absence of information on cultural considerations relating to 30-day follow-up.

To promote the importance of Aboriginal health, Naadmaadwin (1999) emphasizes that the Aboriginal perspective on healing is holistic, and strives to restore connectedness for individuals in their community rather than options presented in a medical model. This blind spot in the positivist medical model creates limitations in program planning and budget allocations to serve this specific population because of minimal data on which to base service needs. In addition to the differences in approaches, there are jurisdictional questions about whether on-reserve services are the responsibility of the federal or provincial government. As such, the quantitative research methods and design of this study are based in the medical model of treatment and intervention as it is based on retrospective medical data. The method and design measure the Performance Measure 5.1 including variables of type of service and multiple and single separations. However it is imperative to acknowledge the relevance of cultural paradigms and potential impacts to service delivery for ethnic minorities with quantitative research (Dietz, 2000).

### *Research Sample*

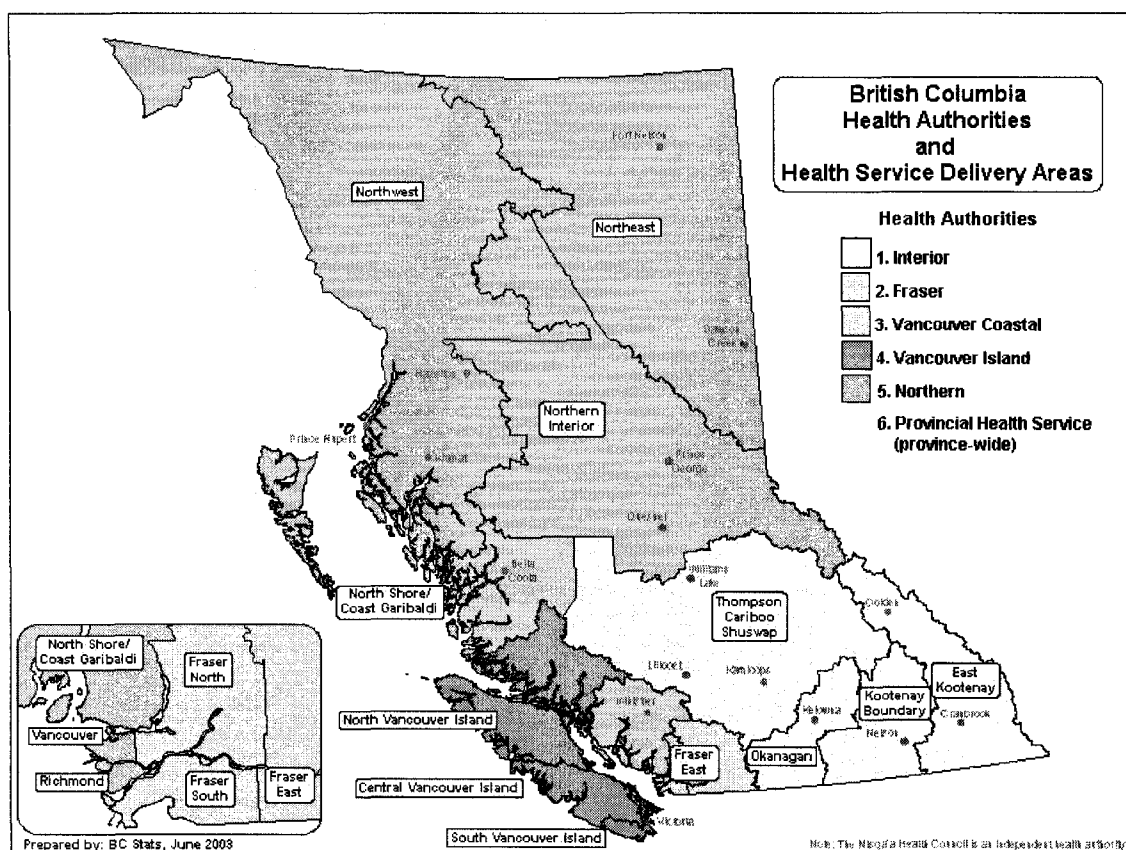
#### *Health Service Area*

The geographic framework for this performance measure is based on a regional health area in the province of British Columbia as defined by the Ministry of Health. The regional boundary limits the sample data making it purposeful and inclusive of all acute care hospital separations for mental health and addictions occurring in the Thompson Cariboo Shuswap Health Service Area. Rubin and Babbie (2005) state that a purposive sample can comprise a subset of a larger population, and as such, is applicable to this study as the Thompson Cariboo Shuswap Health Service Area as a sub-population of British Columbia (Figure 1).

A wide range of communities makes up the Thompson Cariboo Shuswap. Kamloops is the urban centre (containing about half the population). The area extends to sub-centres such as Merritt, Williams Lake, Vernon, and Salmon Arm, and to smaller rural communities like 100 Mile House, Ashcroft, Cache Creek, Lytton, and Revelstoke. The rural communities and outposts include Anahim Lake, Tatla Lake, Lillooet, Chase, Barriere, Little Fort, and Blue River.

The Health Service Area chosen for this study makes up 50% of the Interior Health region geographically, but only 25 % of the Interior Health's regional population. The Interior Health Foundation Report (2003) states the population of 687,701 for Interior Health includes 172,161 for the Thompson Cariboo Shuswap area. The Thompson Cariboo Shuswap population is about 15 % First Nations, with one-third living on reserves and receiving hospital discharge services from a Band council, and the other two-thirds living off reserve with the option of receiving health services from Friendship Centres or federally funded programs.

Figure 1. British Columbia Health Authorities (Ministry of Health, 2003/04, p.3)



### Health Service Area Information Systems

During the 2004/05 fiscal year there were a total of 1,079 acute care hospital separations for people with mental health and addictions events for the Thompson Cariboo Shuswap Health Service Area. The Ministry of Health gathers this information from several computer information systems. The “Hospital Management Information System” (HMIS) provides the baseline data for the hospitalization sample in the study. The data is then compared to the number of client follow-up contacts occurring with community mental health centres that use the *Meditech* client information system to gather the *Minimum Reporting Requirements* for the Ministry

of Health. Additionally, family physicians and psychiatrists report the nature of a client's visit based on the ICD coding system.

The hospital (HMIS) data system uses the ICD 10 codes determined by the treating physician in the hospital to provide categories of the mental illness or addictions treated in the hospital setting. The MOH then sorts these into seven broad diagnostic groups based on mental health and addictions diagnostic codes. While the Ministry of Health has access to all individual cases and diagnoses, the data is grouped in order to prevent any individual from being identified in the study's information, and has sufficient individual cases in each of the diagnostic categories to further protect anonymity and provide valid analysis.

Profiling diagnostic categories and occurrences of hospital separations related to mental illness and/or addiction for 2004/05 provide an information baseline for the Thompson Cariboo Shuswap. The majority of focus on follow-up services is on individuals who were admitted to the two psychiatric units serving the health service area (Royal Inland Hospital & Vernon Jubilee Hospital). In addition to the two psychiatric units, there are seven acute care medical hospitals in the Thompson Cariboo Shuswap to which people are admitted for the related care (Interior Health, 2005/06). Historically, the number of people with mental illness and addiction who visited acute medical hospitals has not been fully identified, and service linkages between these acute medical programs and the community mental health and addiction services have not yet been clearly defined (J.F. Campbell, personal communication, January 12, 2006).

The results of the study will permit the Thompson Cariboo Shuswap Mental Health and Addiction Services to understand data collection practices to improve the system of care, with the potential of increasing performance processes in the future. At this time, there is no data system for Interior Health (or any Health Authority) that can gather all this information. Health Authorities do not have a method to access physicians' MSP billing codes when patients are seen in community medical clinics. The Health Authorities rely on the Ministry of Health to gather the data for this Performance Measure. However, the Ministry of Health only provides the Health Authorities a summary number indicating the percentage of follow-up for the whole Health Authority, and no specific information about what occurs within the local health areas. Due to this generalization of information that the MOH provides the Health Authorities, the data gained through this study will guide the Health Authority towards a greater understanding of the ratio between acute mental illness and addiction separations and follow-up in the specific Health Service Area.

### *Measures*

#### *History of Performance Measures, and British Columbia's Ministry of Health Goals and Performance Targets*

Resulting from regionalization of the British Columbia health care system in December 2001 (when the current Health Authorities were formed), the Ministry of Health entered into its annual Performance Agreements with the six Health Authorities (five geographic regions and one provincial specialized program) to improve operations and outcomes of the health services provided in the province. The purpose of these agreements is to create a mutual understanding of the respective

obligations and expectations of the parties, and to define the performance targets or deliverables for which each Health Authority is accountable.

According to the Performance Agreement (Ministry of Health, 2005), the goals of the Ministry of Health are to encompass excellent quality patient-centred care, improve health and wellness for British Columbians, and provide a sustainable, affordable public health system. The roles of the Health Authorities are to identify the needs of local populations, and to plan and provide services for the public in accordance with legislation and Ministry policy. Health goals and performance outcomes are an integral part of mental health services to improve service delivery by measuring effectiveness (Australian Institute, 1996). Performance outcomes enhance planning for all, including ethnic minorities, by adapting current mental health services in the Thompson Cariboo Shuswap to be more culturally sensitive (Australian Institute, 1996).

The Performance Measurement (5.1) framework looks at the health care system from performance dimensions, as well as categories of functions (2005) including; accessibility, acceptability, effectiveness, safety, work life and human resources, appropriateness, and finance, efficiency and affordability. The categories of functions for the Health Authorities are program focused and include organizational performance, population health and wellness, acute care, home and community care, mental health and addictions, and cross program areas such as palliative care, primary health care, and chronic disease management (Ministry of Health, 2005).

*Performance Measures for Mental Health and Addiction Services*

Adult Mental Health and Addictions Services programs in the Health Authorities are measured on three of seven performance dimensions (Ministry of Health, 2005). These are Accessibility (5.1), Effectiveness (5.2), and Finance, Efficiency and Affordability (5.3) (Performance Agreement, 2005). This research study focuses on examining Performance Objective 5.1 - Accessibility of Services. The primary focus of 5.1 is to “improve integration of health care providers, processes and systems to allow clients to move seamlessly through the system” (Ministry of Health, 2005, p. 11). The Performance Agreement (2005) states that following discharge from an acute care hospital, individuals diagnosed with a primary mental illness or addiction are to be referred to a physician, psychiatrist, or community mental health centre for follow-up services.

The sample is people aged 15 to 64 years because the onset and occurrence of serious mental illness and/or addiction occur most frequently in this age group (Andrews et al., 2000). The performance measure outcome is the percentage of patients who follow-up with a physician, psychiatrist, and/or community mental health follow-up within 30 days of discharge from the acute care hospital. Ford et al. (1995) confirm that intensive supports in the community and assertive outreach for individuals with severe mental illness are possible. The increasing percentage for the Performance Measure then, ideally supports the perspective of patient-centred care, as well as organizational efficiency. Service coordination and effective discharge plans are critical to improve outcomes for persons with acute mental illness and



addiction disorders as they provide clients and their families with necessary information to make informed choices (Davis, 2006).

The British Columbia Ministry of Health set goals for the Health Authorities on this Performance Measure, expecting an increase each year of two percent for community follow-up within 30 days of discharge. The long-range vision for the Ministry of Health is to achieve a 95 % follow-up percentage. The Ministry of Health recognizes that a number of years are needed for the Health Authorities to achieve this high percentage goal. As such, the Ministry established an initial benchmark follow-up target of 72 % for year 2003/04, with an increase of two percent each following fiscal year. Thus, the 2004/05 benchmark percentage target is 74 % for the sample drawn (Ministry of Health, 2005).

As a point of comparison to British Columbia's Ministry of Health's Performance targets for the Health Authorities, the American Health Care Quality report (National Committee for Quality Assurance, 2005) has USA statistics for 2004 on post-acute hospitalization community follow-up percentages. The USA has a private pay system, as well as public plans and service providers. American private or commercial insurers have a 55.9 % follow-up for clients with mental illness at seven days post-discharge, and a 76.0 % follow-up for 30 days after acute care hospital discharge; a percentage almost identical to British Columbia. In contrast, American public or Medicare follow-up percentages are significantly lower at 40.2% at seven days post-discharge, and 60.7% at 30 days post-acute hospital discharge (National Committee, 2005).

There are a number of reasons why it is important to establish formal linkages for post-acute discharge planning. A primary reason for discharge planning is that family physicians in Canada are the primary health care providers for people experiencing mental illness or addiction, and more than half of Canadians who receive mental health services will only consult their family physician (Gagne et al., 2006). Given that family physicians play a central role for people with mental illness or addiction it is essential to support linkages between hospital discharge and family physician. CIHI estimates 30% to 70% of family physician caseloads consist of clients with mental illnesses or addictions (2006). Most Canadian family physicians, 84.2 %, provide mental health care services as an expected part of their caseload (CIHI, 2006). Another reason for a formal system to ensure community follow-up is that 100,000 people in British Columbia are considered *orphaned* because they do not have a family doctor. According to Dr. Bill Cavers, Chair of the B.C. Medical Association's General Practitioner Services Committee, part of the reason for this is "the workload for B.C.'s 3,400 general practitioners is so heavy that many can't properly manage caseloads for clients with complex diseases" (Lee, 2007, p. B8). Due to high numbers of patients who may be discharged without physicians, the linkages to community supports are essential in supporting post hospital counselling and support.

#### *Research Plan and Data*

The sample data are inclusive of all acute care hospitalizations occurring in the Thompson Cariboo Shuswap Health Service Area, which were coded by physicians as mental illness or addictions during the fiscal year April 1, 2004 to

March 31, 2005 [CIHI], Hospital Mental Health Services in Canada (2002-03).

According to the Ministry of Health, the data were extracted retrospectively in March/April 2006 from databases. As a result, the follow-up frequencies for the last month (March) for the fiscal year 2004/05 are included in the data, and not considered to be missing data because it includes the 30 days following last discharge. Through descriptive and exploratory analysis all the measured community follow-up services occurring within 30 days of discharge are examined.

### *Data Information Systems*

The Ministry of Health gathers data for Performance Measure 5.1 from four different information systems and provides a summary percentage number to the health authorities three times a year as part of performance monitoring to achieve the percentage targets. In addition to the “Mental Health Research Database” (MHR) about best practices, the four information systems from which the Ministry of Health gathers information for this Performance Measure are the:

1. Discharge Abstract Database (DAD), an Acute Care Hospital system that provides the diagnostic coding determined by the physician at the time of the hospital separation. This information provides the baseline data from which the sample was measured.
2. Client Patient Information Management System (CPIM), the computer system historically used by B.C. Community Mental Health Centres when providing services ranging from Intakes and Crisis Urgent Response, to Counselling and Case Management services. Prior to regionalization in 2001, all community Mental Health Services (for children, youth, adults, and the elderly) were

registered. Since regionalization, CPIM is still used by the Ministry for Children and Family Development (MCFD) for child and youth mental health services, but are now used less by each of the Health Authorities as they develop their own client information systems.

3. Medical Services Plan (MSP) database, the fee-for-service payment system used by family physicians, general practitioners, and psychiatrists when billing for time spent with clients. The physicians use an International Classification of Diseases (version ICD 10) codes for the reasons for the visit. ICD 10 data that matches the clients' Medical Care Card and/or Personal Health Number (PHN) with their discharge abstract database (DAD) reason for their Acute Care Hospitalization are counted into the data to be studied.
4. Mental Health Minimum Reporting Requirements (MRR) is an information system developed by the Ministry of Health, to which all Health Authorities are to provide data regardless of the information system they use. The MRR is a more detailed information system that has been replacing the CPIM system as each Health Authority develops their regional databases. The Interior Health Authority chose a client information system called Meditech and added on a Mental Health module to capture information required by the Ministry of Health data reporting requirements (MRR). (Information Resource Management, 2005)

From the four information systems (DAD, CPIM, MSP, and MMR) the Ministry of Health gathered all the hospital separations (1,079 frequencies) and the

types of follow-up coding by physicians, psychiatrists, and mental health centres in the community in the Thompson Cariboo Shuswap Health Service Area.

### *Ethics Approval*

The research proposal and design was submitted to and approved by the Research Ethics Board of the University of Northern British Columbia (Appendix C) and the Research Chair of the Interior Health Authority. Both ethical approvals were acquired before the researcher started analyzing the data, and the processes followed are described in this section.

A Certificate of Delegated Approval was granted by Ann Ferguson, Chair, on behalf of the Interior Health Authority. The researcher also signed a “Research and Data Sharing Agreement” for Interior Health that includes confidentiality, information privacy, and security conditions, as well as Freedom of Information and Protection of Privacy when using IHA computers and information systems.

No individual participant was identified in this research. The data are secondary information entered on information technology (IT) systems in Interior Health hospitals, community mental health and addiction services, and MSP fee-for-service physicians. The Ministry of Health, Information Systems in Victoria, British Columbia gathered the data from the four computer data information systems for the Thompson Cariboo Health Services Area of the Interior Health Authority. The researcher did not have access to any patient medical or health care records for this study, and so, cannot identify any individual whose information was included in the study data. All personal identifying information in the sample was removed by the Ministry of Health and changed to non-identifying coding numbers prior to being

released. The non-identifying data were provided in summary tables to the Researcher for analysis of trends.

Since the data analysis involves statistical trends and category analysis, and not individual case information, there is no potential harm to any subject. The research is not an experimental model. Instead, the study consists of third-party retrospective data with all individual identifying information removed. Anonymity was guaranteed because the Ministry of Health provided only non-identifying discharge data and community service data for analysis.

As required by professional practice and ethical standards, the researcher signed an oath of confidentiality with the Interior Health Authority to neither disclose nor discuss any identifying information. In addition, before the commencement of this study the researcher completed web-based Tri-Council tutorial on “Ethical Conduct of Research” to ensure the consideration of ethical practices. The data used for this research is owned by the Interior Health Authority through agreement with the Ministry of Health. The researcher was provided access to the information for the period of the data analysis and writing of this thesis. Storage and disposal of the data will follow Ministry of Health policies and procedures.

### *Procedures*

The research examines and describes community follow-up for Performance Measure 5.1. The hospital separations received from the Ministry of Health information systems were analysed through the Statistical Program for Social Sciences (SPSS) and the Microsoft Access Database. The data were a subset of the annual data gathered by the Ministry of Health when analyzing the Interior Health

Authority performance measure focusing on the Thompson Cariboo Shuswap Health Service Area.

### *Analysis*

The researcher conducted data analysis that described follow-up as it relates to Performance Measure 5.1, and then compared each of the diagnostic categories to determine the proportion of each being followed-up by physicians, psychiatrists, community mental health centres, and the local health areas. The analysis examines the numbers, distribution, and percentages of diagnostic category groups shown as not being followed-up by one of the three community services.

The variables analysed are measured and tabulated as defined by the research questions. The seven diagnostic category groupings, separations (multiple and single), acute care hospitals, the client's home local health areas, type of follow-up and local health area are the variables. The descriptive analysis consists of the variables, listing frequency distributions (means, standard deviation, modes, and medians), percentages (valid and missing), ranges, bar graphs, and distributions. Inferential statistics are not utilized in this analysis as the assumption for the dependence of the variables was violated as individual patients could be discharged more than once from the hospital during the fiscal year 2004/05.

### *Data Limitations*

The outcome measures are generated only by individuals who receive acute care hospital services, and not the total population of need, hence the overall number of individuals who require mental health or addiction services are not addressed in

the data analysis. In addition, the data for this research project may potentially have further limitations due to regional demographics. For example, in comparison to the Thompson Cariboo Shuswap, the three other health service areas in the Interior Health Authority have between one percent and four percent First Nations population (Interior Health, 2004). However, 50% of the Aboriginal people who live in the Interior region reside in the Thompson Cariboo Shuswap where they make up about 15% of its overall population. These people may be connected to 43 of the 57 First Nations organizations in the Interior that are located in the Thompson Cariboo Shuswap (Interior Health, 2004). According to Interior Aboriginal Health (2004), approximately one-third of the First Nations population live on-reserve, and receives services from Band workers. Whether the supports people access from Band workers are in addition or not, to follow-up services as described for Performance Measure 5.1, is unknown. Another one-third of the population is status but lives off-reserve, and the remaining third is non-status or Métis, who also live off-reserve.

There are further service considerations in the Thompson Cariboo Shuswap compared to a general population distribution. A number of regional services including the Tertiary Psychiatric Centres, the Addictions Medical Withdrawal Detox, and Addictions Supportive Recovery facilities, as well as the Regional Community Forensic Centre, and the Regional Correctional Centre are all located in Kamloops (J.F. Campbell, personal communication, January 12, 2006). This means the Thompson Cariboo Shuswap area provides a number of regional mental health and addiction services, plus forensic and correctional services for the population of



the Interior region, who generally would return to their home health service areas for follow-up.

In addition to limitations resulting from population demographics, a social and philosophical consideration is the “stigma attached to mental illness [which] presents a serious barrier not only to diagnoses and treatment but to acceptance in the community” (Health Canada, 2002, p. 7), as well as the integration of cultural diversity within mental health and addiction services. For example, a mental health clinician or physician’s model of treatment may not be culturally sensitive or compatible with Aboriginal values and beliefs surrounding healing for mental illness and/or addiction. As a result, individuals may be faced with the social stigma of having a mental illness and/or addiction and treatment that is contrary to their culture. Stigma and cultural diversity are not addressed in this study, but are acknowledged by Health Canada (2002) and Andrews et al. (2000) as an influence on whether people choose follow-up services and what type of support they find beneficial.

Other demographics not included in this study are the analysis of gender, or ages of the individuals discharged from hospitals. The information provided from the Ministry of Health regarding age, is that the patients discharged from the hospital would be between the ages of 15-64 years. This presents a limitation in the data analysis, not knowing the specific age as the “onset of most mental illnesses occurs during adolescence and young adulthood” (Health Canada, 2002, p. 7). According to CIHI (2006) the age range during which hospitalizations is most likely to occur is between 25 to 54 years. Having access to gender and age specific data, as well as ethnic or cultural origin would have provided additional dimensions when examining

Performance Measure 5.1. These results could then provide data with fewer limitations to improve service delivery planning within the Thompson Cariboo Shuswap Health Service Area.

A limitation in this study is that many services in the community that provide support to individuals with acute mental health and addiction disorders are not included in the follow-up measurement. The Ministry of Health focuses on measures specific to Performance Measure 5.1, which are not inclusive of the range or diversity of services that people may choose to access after hospital discharge. If the Performance Measurement (5.1) included other support and service options, it would be reasonable to suggest that the percentage of measured follow-up would increase. For example, Anthony's (2008) research study on community support services promotes the concept that recovery for people with severe mental illness should include teaching, learning, spirituality, creativity as well as medication and therapy. These concepts could be incorporated in services ranging from pastoral counseling, private counselors, and Canadian Mental Health Association programs to self-help and peer support options. Gagne, Dudgeon and Kates (2006) emphasize the effectiveness of collaborative mental health services through use of outreach support in shelters and drop-in centres, as well as private and public corporations. Informal social supports are valuable as an option for improving mental health and addiction recovery as it reduces risk factors such as isolation and suicide ideation (Wright, 2006). Furthermore, a variety of therapeutic choices that provide meaning, purpose, and empowerment will promote success by improving the quality of a person's life

and reduce symptoms that may lead to hospitalization for psychiatric disorders (Deegan, 2005; Deegan, 1997).

A criticism which could be levied about the design and analysis of this study is the absence of input from consumer-survivors who have experienced acute mental health and addiction crisis. Due to the use of secondary data and quantitative nature of the research study the involvement of consumers-survivors was not utilized. The valuable contribution of individuals who experience mental illness and addiction is a fundamental component of accountable mental health research and contributes to a collaborative process with the mental health and addiction system to improve services (Adelman, 2003; Anthony, 2008; CMHA, 2005; Citizens for Mental Health, 2003). Chamberlin (1998) advocates for the rights of consumers to decide their own path for healing but also the right to participate in service planning, and funding allocations for mental illness and addiction services. The collaboration and integration of consumers in developing and evaluating evidenced based practice can support recovery as well as improve skill and knowledge of clinicians (Anthony, Chamberlin, Farkas, & Gagne, 2005). The level of consumer-survivor involvement in the development of the Ministry of Health's Performance Measure 5.1 on the 30 day follow-up services is unknown yet the Ministry of Health acknowledges the services measured have limitations (2005).

Even though there are limitations in the data provided by the Ministry of Health for this research study, the results provide beneficial information and subsequent recommendations. Taking into account the areas of deficiency, the data analysis constitutes advancement in knowledge by providing detailed information to

assist with the development of organizational and technological systems to respond to the Performance Measurement Indicator.

### *Summary*

The relevance of this study is described through the literature and theoretically supported in the methodology. Research and government documents highlight the prevalence of mental illnesses and addictions, and the need to understand the types of services that benefit individuals admitted to acute care hospitals (Borus & Olendaki, 1985; CIHI, 2006; Kirby & Keon, 2006; Kirsh et al., 2005; Lechnyr, 1992; Waddell et al., 2002). The positivist methodology uses quantitative research to describe types of services (Performance Measure 5.1) accessed from 1,079 acute hospital separations in the Thompson Cariboo Shuswap Health Service Area. Methods and procedures follow ethical requirements permitting the exploration of follow-up through hospital separations, diagnostic groupings, type of service, and hospital location.

Implications for social work policy and practice are foremost in this research topic because the aim of this study is to provide information and data analysis on patterns used to improve aspects of follow-up services delivered by Mental Health and Addiction Services in the Thompson Cariboo Shuswap Health Service Area. This could be achieved in part by understanding the trends and percentages of the distributions of follow-up services. The results of the research analysis further identifies topics of related study about people who experience acute mental illness and/or addiction, and considerations about linkages to services and the improvement of supports.

## CHAPTER FOUR

### Results

The purpose of the analysis for this study is to identify the follow-up proportions for Performance Measure 5.1, and provide a description of variables based on hospital separations for patients with mental illness or addictions, including broad diagnostic groupings, types of service, hospital locations, and percentages of follow-up. A series of data analyses explore follow-up percentages among selected categories: broad diagnostic categories, types of follow-up, local health areas, hospitals, and multiple or single separations. Figurative illustrations and tables portray the descriptive analysis examining the distribution and patterns of variables. The sample consists of 1,079 hospital separations based on data obtained from hospital management information systems (HMIS), medical services plan (MSP), and mental health centres (MHC). The statistical analysis is first focused on the frequencies and percent distribution of hospital separations on each of the variables, with a description of proportions between groups to follow.

#### *Frequencies*

Frequency statistics are calculated to provide an understanding of the characteristics of the sample ( $n = 1,079$ ). The distribution and pattern of the variables include types of follow-up services (MSP vs. MHC), local health areas (including hospital-specific information), broad diagnostic categories, and number of admissions (single vs. multiple).

### *1. Overall Sample Size*

The sample provides not only the numbers of separations from acute care hospitals, but also the number of times an individual visited the hospital. The sample for this inquiry involves 1,079 hospital separations occurring in the Thompson Cariboo Shuswap Health Service Area in the 2004/05 fiscal year. In order to ensure that all the individuals who were hospitalized during this fiscal year were included in the 30-day follow-up information, the Ministry of Health gathered the information three months after the end of the fiscal year to allow adequate time to process all transactions. Further, each hospital separation represents a hospital admission/discharge, and not a unique individual.

In fact, the 1,079 hospital separations represent 804 individuals: 624 (77.6%) were admitted to a hospital once during the fiscal year; 125 (15.5%) were admitted to hospital twice during the year; 33 (4.1 %) were admitted three times; 12 (1.4 %) were admitted four times; 4 (0.49 %) were admitted five times; 4 (0.49 %) of whom were admitted six times; and 2 (0.24 %) were admitted seven times. Of the 804 individuals, 180 (22.4%) had multiple (two or more) hospitalizations during the fiscal year.

### *2. Overall Follow-up in Thompson Cariboo Shuswap, Sample Size and Follow-up*

This analysis within the scope of Performance Measure 5.1 provides the results on follow-up, numbers of separations (sample) and the baseline for further analysis and subsequent comparisons of variables. Within the area of study, the overall 30 day follow-up was 819 (75.9%) of the 1,079 separations, which is higher than the required performance target of 74% for 2004/05. Only a slight improvement

(0.1%) will meet the required performance target of 76% for the 2005/06 fiscal year.

The 260 separations not resulting in follow-up were described in terms of proportion of type of follow-up. However a qualitative approach to examine the 260 separations and possible discussions with individuals discharged from hospitals could provide useful information for improving follow-up percentages in the future.

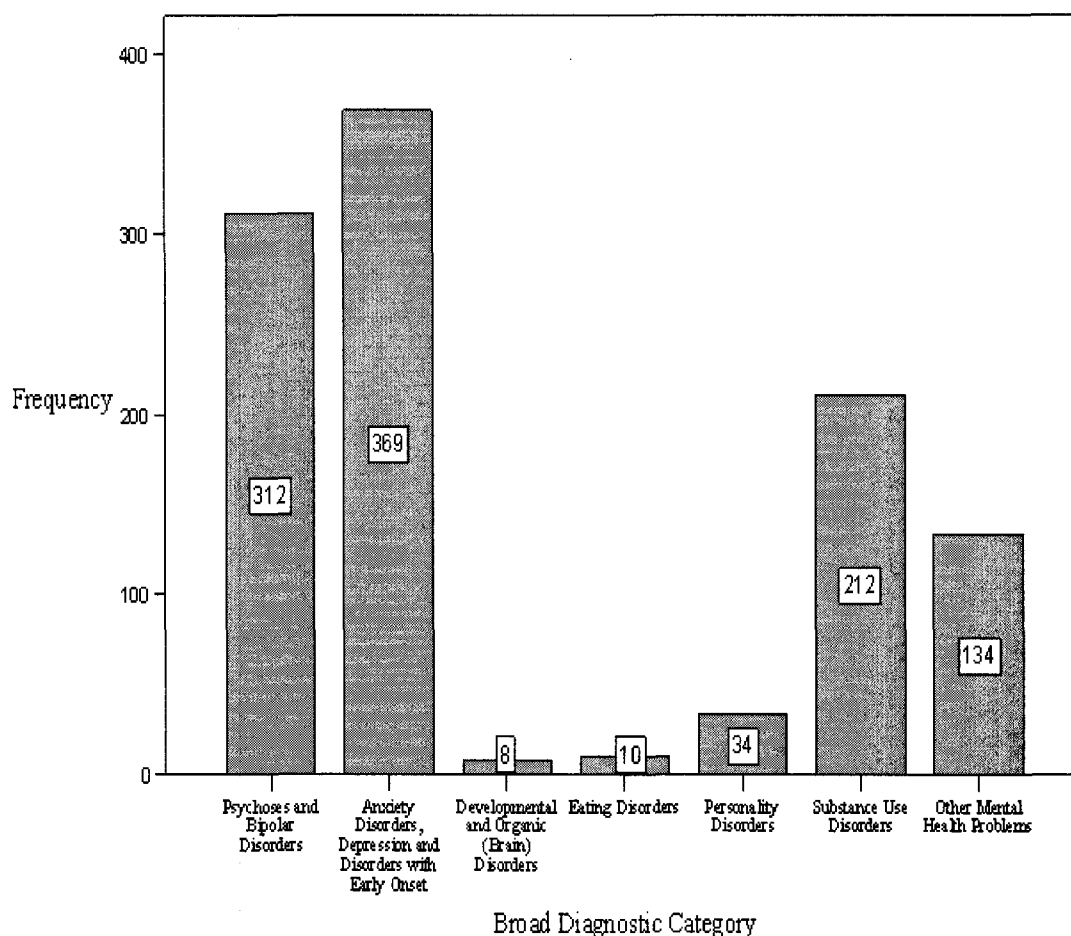
### *3. Broad Diagnostic Categories*

The data analysis for each of the broad diagnostic categories<sup>2</sup> provided descriptions and frequencies for the three types of follow-up services, and proportions for the local health areas and specific hospitals. The most frequent diagnostic category in the hospital separations is anxiety disorders, depression and disorders with early onset, with 369 (34.2%) of 1,079 separations. The second largest category was psychoses and bipolar disorders; there are 312 separations, 28.9% of the total of 1,079. Separations for substance use disorders were 212 (19.6% of the total number of separations). The diagnostic category group of other mental health problems had 134 separations, 12.4% of the total 1,079. The diagnostic group of personality disorders has 34 separations, which is 3.2% of 1,079. The smallest diagnostic categories include eating disorders with 10 separations, which is 0.92% of the total 1,079, and developmental and organic (brain) disorders with eight separations, which is 0.74% (see Figure 2).

---

<sup>2</sup> The term “broad diagnostic categories” stems from ICD 10 codes that physicians bill MSP against, which are then grouped into diagnostic categories by the Ministry of Health when summarizing the mental illness and/or addiction codes used by physicians for individuals who were hospitalized. The intent of this is to provide a diagnosis category grouping of the symptoms that physicians noted in the medical charts as categories of the reasons for individuals’ hospitalizations and not as labels of people as specific disorders.

Figure 2. Diagnostic Broad Categories



#### 4. Type of Follow-up

The analysis provides a description of where people received follow-up services for their mental illness or addictions hospital admission. The separations and type of follow-up are based upon the data received by the Ministry of Health from physician and psychiatrist Medical Services Plan (MSP) billings, and/or community Mental Health Centres (MHC). Individuals discharged from acute care hospitals receive a referral for a follow-up (MSP or MHC) to occur within 30 days. The total amount of follow-up is 819 (75.9% of 1,079 separations). The MSP only



30 day follow-up is 294 (27.2% of 1,079 separations). There are 130 separations with MHC only follow-ups, which is 12% of the total separations, whereas MSP and MHC (jointly) have 395 follow-up services which is 36.6% of the total number of separations<sup>3</sup>.

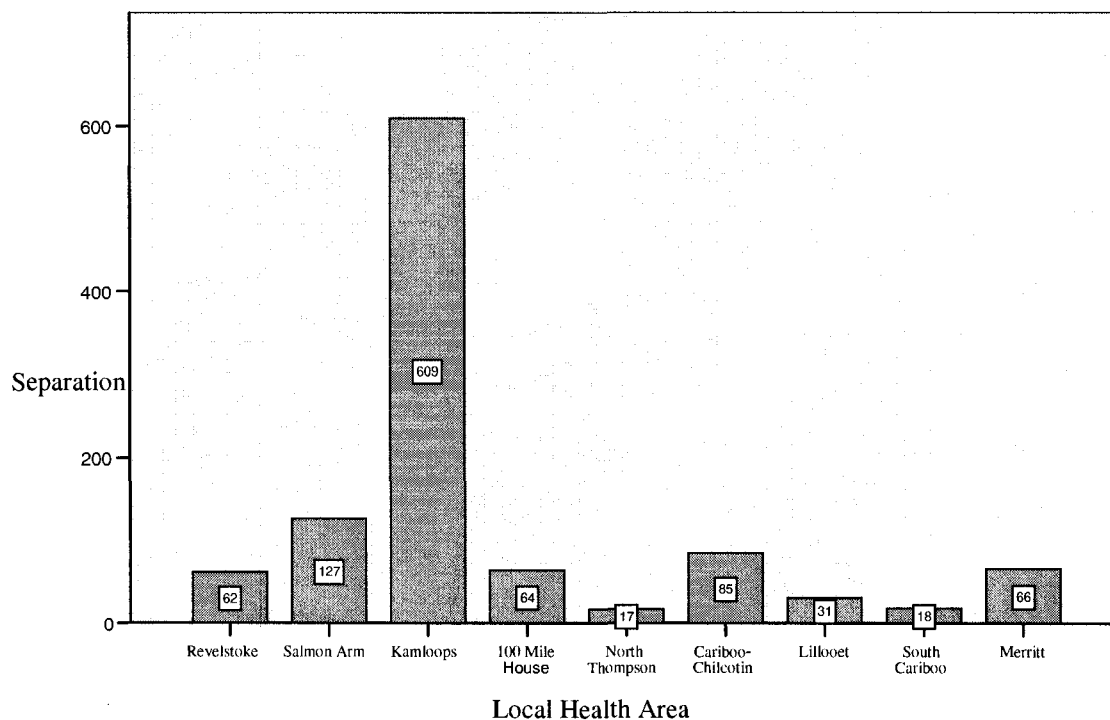
### *5. Local Health Area*

The data analyses for local health areas illustrate the distribution of separations throughout the Thompson Cariboo Region. Within the Thompson Cariboo Shuswap HSA, there are nine local health areas (LHAs). The number and range of separations for each LHAs are depicted in Figure 3. The lowest number of separations occurred for the North Thompson LHA at 17, or 1.6% of 1,079 separations. The highest number of separations, 609, occurred at the Royal Inland Hospital (RIH) and totaled 56.4% of the 1079. Other than Kamloops the remaining eight LHA's ranged between 17 and 127 hospital separations.

---

<sup>3</sup> Please note the necessity to add the percentages with three decimal points to accurately achieve the total percentage of 75.90%. The numeric values of 27.247% + 12.048% + 36.607% = 75.902%.

*Figure 3. Hospital Separations and Local Health Areas (LHAs).*



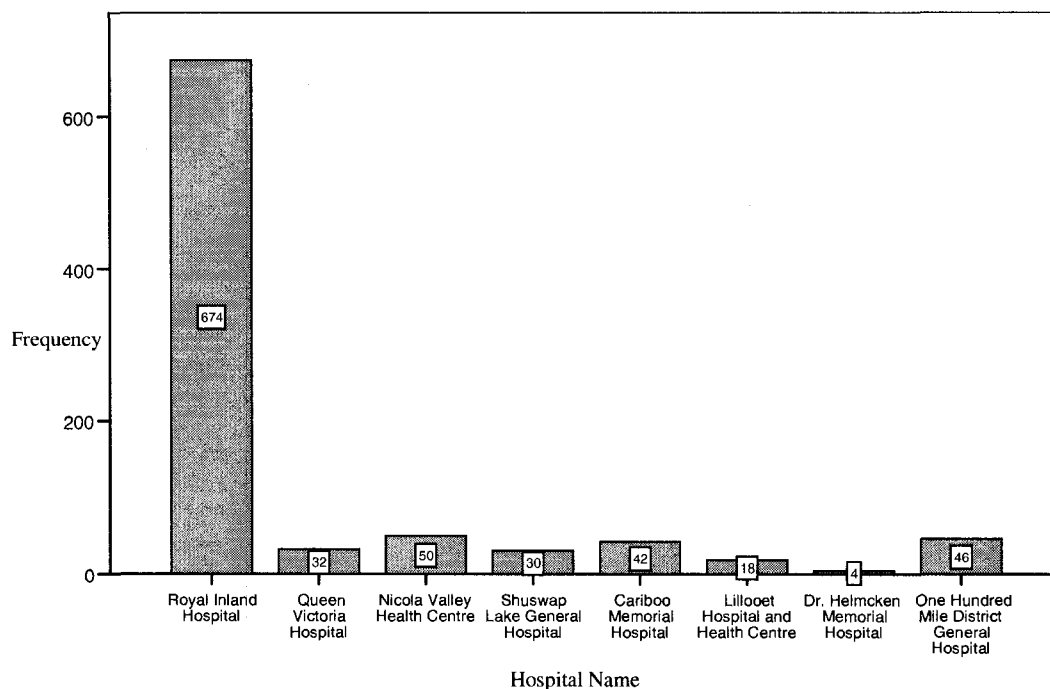
Royal Inland Hospital in Kamloops provides the acute inpatient psychiatric services for the seven LHAs in the Thompson Cariboo area which include Kamloops, 100 Mile House, Cariboo Chilcotin, Lillooet, South Cariboo, Merritt, and North Thompson. In addition to the greater population of Kamloops, the elevated frequencies in the Kamloops local health area are also due to the fact that the Royal Inland Hospital is the referral hospital for the six smaller health care sites in the Thompson and Cariboo. The other two LHAs, Revelstoke and Salmon Arm in the Shuswap, use the acute inpatient psychiatric services at Vernon Jubilee Hospital.

An example of one of the seven LHAs referring to Kamloops is the Cariboo Chilcotin, which has a population of 26,887 surrounding Williams Lake (Ministry of Labour, 2005). The Cariboo Chilcotin does not have a psychiatric inpatient unit, but there is a five-bed crisis stabilization unit located in the Williams Lake hospital for mental illness and addiction crisis. However, all serious mental illness occurrences in the Cariboo Chilcotin LHA require individuals be transferred to the Royal Inland Hospital inpatient psychiatric unit (26 beds) in Kamloops (population of 92,898) as it is the regional (HSA) acute care and tertiary hospital (Ministry of Labour, 2005).

Figure 4 illustrates the frequencies of acute care hospital separations for each of the seven hospitals in the Thompson Cariboo Shuswap Health Service (TCS) Area. From the 1,079 separations in this study, there are 896 TCS separations from the TCS hospitals, and 183 separations from hospitals outside the TCS area.

Although the 183 separations are from hospitals outside the TCS area, all the follow-up frequencies are included in the baseline data because those hospital separations report TCS as their LHA as it is the patient's home community. The Royal Inland Hospital (RIH) serves the largest population in the Thompson Cariboo Shuswap, and experiences the largest number of separations, 674, which is 75.2% of the total 1,079. Three other hospitals with relatively high separation percentages are Nicola Valley Health Centre, with 50 (5.6%) of 1,079, 100 Mile District General Hospital, with 46 (5.1%) of 1,079, and Cariboo Memorial Hospital, with 42 (4.7%) of 1,079. Please see Appendix D for additional information regarding hospitals and follow-up to further describe the trends and patterns within TCS Health area.

Figure 4. Sample Size (Separations) by Hospital



### *Comparisons of Groups*

Detailed data analysis in the subsequent section compares groups related to the Performance Measure 5.1 including number of separations and follow-up.

Proportions of follow-up are evaluated within the diagnostic groups for each of nine hospitals in TCS area of Interior Health (see Appendix D regarding specific hospitals).

The data analysis provides percentages of follow-up with mental health centres, and/or medical services plan (psychiatrist and general practitioner) using the seven broad diagnostic category groupings. The number of broad diagnostic groups varies depending on the health centre from which the data originates, and who enters

the diagnosis category into the system (i.e., mental health centre versus physician) as well as a person's discharge record from the hospital. The broad diagnostic groups (Appendix B) are derived from the International Statistical Classification of Diseases and Related Health Problems (ICD Codes).

### *1. Broad Diagnostic Categories versus Follow-up*

The analysis explores follow-up rates as a function of broad diagnostic categories. The follow-up percentages for individuals are identified by the broad diagnostic category (Table 1). The highest follow-up for clients includes the following three broad diagnostic groups: psychoses and bipolar disorders have a follow-up of 83.9% with 262 of total 312; personality disorders have follow-up percentage of 82.3% with 28 of total 34; and anxiety disorders, depression and disorders with early onset have follow-up percentage of 81.0%, which is 299 of 369. Four diagnostic groups with the lowest percentages for follow-up include: eating disorders, which have 70% follow-up for 7 of 10; substance use had 135 follow-ups which is 63.6% of 212, organic brain disorders had follow-up percentage of 62.5% which is five of eight and other mental health problems have 61.9% follow-up which is 83 of total 134.

Table 1. Broad Diagnostic Categories and Follow-up.

Broad Diagnostic Groupings	Frequency	Follow-up	Percent
Anxiety Disorders, Depression and Disorders with Early Onset	369	299	81.1
Psychoses and Bipolar Disorders	312	262	83.9
Substance Use Disorders	212	135	63.7
Other Mental Health Problems	134	83	61.9
Personality Disorders	34	28	82.4
Eating Disorders	10	7	70.0
Developmental and Organic (Brain) Disorders	8	5	62.5
Total	1,079	819	75.9

## 2. Type of Service versus Follow-up

This section describes the analysis for the proportions and percentages of the three follow-up types, diagnostic code, and local health area. There is no information about the motivation for personal choice on the type of follow-up and it is not within the scope of the study. The data analysis presents descriptive statistics on where people visit for services (i.e., psychiatrist, physician and/or mental health centre).

### a). Medical Service Plan (MSP) Follow-up

Individuals who attended physicians for follow-up chose between a general practitioner or a psychiatrist, both of whom bill MSP for services. As well

individuals could see both a general practitioner (physician) and a psychiatrist, so MSP data in this study were separated to determine how many individuals visited only a general practitioner or psychiatrist, and how many individuals attended both for their follow-up services. Alternatively people could visit both MSP and MHC for 30 day follow-up.

Table 2 identifies the number and percent of follow-up for MSP only, MHC only, both MSP and MHC and no follow-up with the corresponding broad diagnostic category. The frequencies reflect the number of follow-up that occurred based on the 1,079 separations, and not upon the 804 individuals. The percentage of MSP only follow-up for broad diagnostic categories are in descending order are: anxiety disorders, depression, and disorders with early onset at 31.7% or 117 follow-up of 369, psychoses and bipolar disorders at 24.3% or 76 follow-up of 312, substance use disorders at 32.0% or 68 follow-up of 212, and other mental health problems at 20.8% follow-up or 28 of 134.

The highest percentage of follow-up for both MSP and MHC belonged to the diagnostic category of eating disorders with 60.0% or 6 of 10, followed by personality disorders with 58.8% or 20 of 34, psychosis and bipolar with 44.2% or 138 of 312, anxiety disorders depression and disorders for early onset had 37.6% or 139 of 369, substance use disorders had 24.5% or 52 of 212, other mental health problems had 28.3% or 38 of 134, and lastly 25% or 2 of 8 for developmental and organic brain disorders.

As a point of comparison the follow-up for MHC only is illustrated in Table 2, with the highest percentage for psychoses and bipolar disorders at 15.3% or 48 of

312, followed by personality disorders at 14.7% or 5 out of 34, other mental health problems at 12.6% or 17 out of 134, developmental and organic brain disorders had follow-up of 12.5% or 1 out of 8, anxiety disorders, depression and disorders with early onset had 11.6% or 43 of 369, eating disorders had 10.0% or 1 of 10, and lastly substance use disorders had follow-up of 7.5% or 15 of 212.

The diagnostic category with highest percentage of no follow-up is other mental health problems at 38.0% or 51 of 134. This is followed by developmental and organic brain disorders at 37.5% or 3 of 8, substance use disorders with 36.2% or 77 of 212, eating disorders with 30.0% or 3 of 10, anxiety disorders, depression and disorders with early onset with 18.9% or 70 of 369, personality disorders at 17.6% or 6 of 34 and lowest percentage of no follow-up is 16.0% or 50 of 312 with psychoses and bipolar disorders.



Table 2. Broad Diagnostic Category and Type of Follow-up.

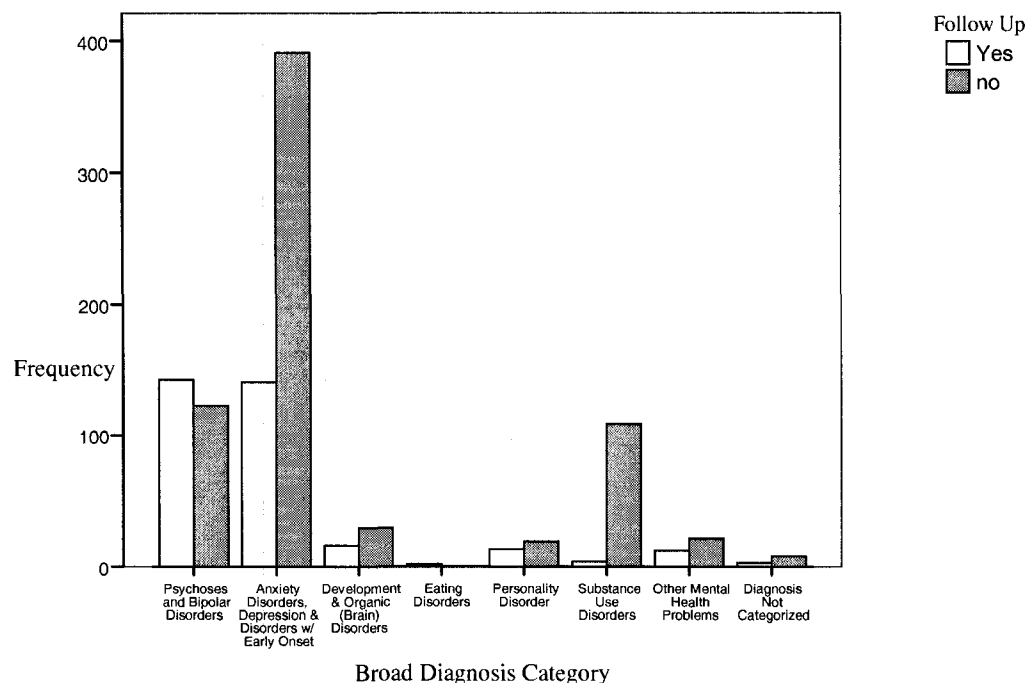
Broad Diagnostic Categories	Total Separations	MSP Only Follow Up	MHC only Follow Up	Both MSP & MHC	No Follow Up
Anxiety Disorders, Depression and Disorders with Early Onset	369	117 (31.7%)	43 (11.6%)	139 (37.6%)	70 (18.9%)
Psychoses and Bipolar Disorders	312	76 (24.3%)	48 (15.3%)	138 (44.2%)	50 (16.0%)
Substance Use Disorders	212	68 (32.0%)	15 (7.5%)	52 (24.5%)	77 (36.2%)
Other Mental Health Problems	134	28 (20.8%)	17 (12.6%)	38 (28.3%)	51 (38.0%)
Personality Disorder	34	3 (8.8%)	5 (14.7%)	20 (58.8%)	6 (17.6%)
Eating Disorders	10	0 (0.0%)	1 (10.0%)	6 (60.0%)	3 (30.0%)
Developmental and organic brain disorders	8	2 (25.0%)	1 (12.5%)	2 (25.0%)	3 (37.5%)
Total	1079	294 (27.2%)	130 (12.0%)	395 (36.6%)	260 (24.0%)

*b). Psychiatrist Only Follow-up*

Figure 5 illustrates the sub-analysis of the frequency of follow-up provided by psychiatrists compared to the rates of broad diagnostic categories seen. There are 531 separations for anxiety disorders, depression, and disorders with early onset at 140, or 26.3% following-up with a psychiatrist. In comparison to individuals who have physician only follow-up (Figure 6), those who only follow-up with only psychiatrists have similar percentages of follow-up for the diagnoses of psychosis and bipolar disorders with 142 or 53.7% follow-up of 264. However, substance use has a low frequency for psychiatrist follow-up of four which is 3.5%.

Individuals with developmental and organic (brain) disorders have a follow-up of 16 or 35.5% of 45. Eating disorders have two frequencies and both also followed-up with a psychiatrist. The diagnostic category of personality disorders has 13 follow-up or 40.6% of 32. There are 33 frequencies for people diagnosed with other mental health problems and 12 or 36.3% follow-up. Individuals with diagnostic codes not categorized have 11 frequencies and three or 27.2% had follow-up with psychiatrist only. In total there were 332 (32.2%) follow-up leaving 698 or 67.8% of 1030 referrals for service that did not follow-up with psychiatrist only.

Figure 5. Psychiatrist Only Follow-up.

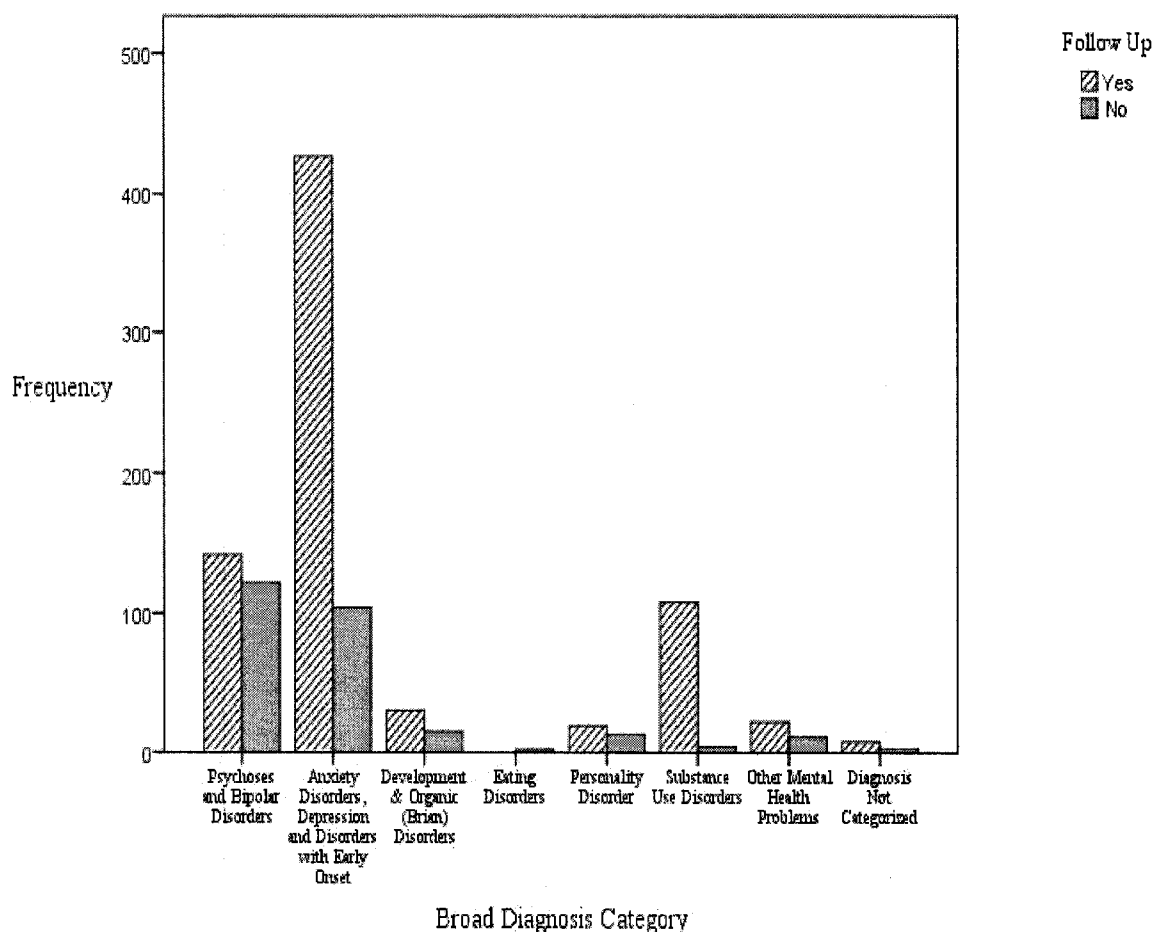


c). *Physician Only Follow-up*

Figure 6 illustrates the frequency of diagnostic categories of 30 day follow-up by physicians only. There is an overall high follow-up percentage of 73.4% or 756 of 1030 referrals for service. The largest diagnostic category seen for general practitioners is anxiety disorders, depression, and disorders with early onset at a frequency of 531, where 427 or 80.4% follow-up. In contrast to the psychiatrist only frequencies, clients with substance use have a high follow-up with general practitioners: 108 or 98.1% follow-up out of 200 separations. Individuals with personality disorders have lower numbers of follow-up with physicians: 19 or 59.3% have follow-up of 32 separations. Individuals with psychosis and bipolar disorder

have 142 or 53.7% follow-up for 264 separations. Physicians only have higher frequencies for follow-up in clients with anxiety disorders, depression and disorder with early onset (427 versus 140) than do the psychiatrist only follow-up. As well, people with substance use disorders have far more follow-up with general practice physicians (108 separations had follow-up) than with psychiatrists (four separations had follow-up).

*Figure 6. Physician Only Follow-up.*



*d). Mental Health Centre Follow-up*

Subgroup analysis identifies 525 occurrences where individuals attend mental health centres for their 30-day follow-up. The patient would receive a diagnosis at the time of discharge from the hospital by the attending physician or psychiatrist. Yet, a substantial portion of these individuals did not have corresponding diagnoses entered on the Meditech computer system at Mental Health Centres during the follow-up time of this study.

The Meditech client information entered by the mental health clinician does not require a diagnostic code to be entered until the client file is closed which has no definite time requirement. Thus, the coding for diagnostic codes may be identified after 30 days has past. The MHC subgroup analysis identifies that 233 or 44.3% of 525 follow-up frequencies do not have a diagnostic category at the time the data was collected for the Ministry of Health. The diagnostic codes that are entered on the Meditech system at mental health centres within 30 days after discharge are initially derived either from the discharge physician or psychiatrist through referral forms. There are 159 (30.2%) follow-up frequencies entered into the database within the diagnostic category group other mental health problems. The remaining distribution has five diagnostic groups identified of the 525 frequencies as follows: psychoses and bipolar disorders at 51 or 9.7%, anxiety disorders, depression, and disorders with early onset 48 or 9.1%, substance use disorders with 31 or 5.9%, 2 or 0.3% had diagnoses not categorized and eating disorders at 1 or 0.1%. Further research would benefit Mental Health Centres by exploring when clinicians enter the data on the Meditech system, and how that timeframe may influence the data being recorded.

### *3. Local Health Areas, Diagnostic Categories and Follow-up*

Table 4 describes the analysis of the variables for the local health areas (LHAs) and broad diagnostic categories, showing trends and distributions in the different geographic locations. The broad diagnostic categories in Table 4 provide frequencies for the diagnostic categories occurring in the nine LHAs.

The largest diagnostic category group is for separations with anxiety disorders, depression, and disorders with early onset at 369 or 34.2% out of 1,079 separations occurring in all LHAs, showing the highest frequencies in Kamloops, Salmon Arm, 100 Mile House, Merritt, and Revelstoke. The second largest diagnostic category for separations is psychosis and bipolar disorders with 312 (28.9%) of 1,079 separations. This trend presents across all LHAs, with the highest frequencies being in Kamloops, Salmon Arm, the Cariboo Chilcotin, and Revelstoke.

Substance use disorders are the third largest broad diagnostic category with 212 (19.6%) of 1,079 separations. The highest frequencies are in Kamloops, Cariboo Chilcotin, Salmon Arm, and Merritt. Kamloops, the largest population area, has the majority of separations with 27 or 79.4% of 34 for the diagnostic group category of personality disorders; conversely, a number of the LHAs have few or none of this diagnostic category. The fourth largest number of frequencies was for separations with other mental health problems at 134 or 12.4% of 1,079 frequencies. The two smallest diagnostic categories are eating disorders and developmental and organic (brain) disorders, with 10 or 0.9% separations out of 1,079 separations for the former, which primarily occurs at Kamloops, where the Eating Disorder team is located, and

eight or 0.7% separations of 1,079 separations for the latter, which is recorded at five of the nine LHAs.

Table 3. Local Health Area versus Broad Diagnostic Category.

Broad Diagnostic Category	Kamloops	Salmon Arm	Cariboo-Chilcotin	Merritt	100 Mile House	Revelstoke	Lillooet	South Cariboo	North Thompson	Totals
Psychoses and Bipolar Disorders	161	51	37	14	9	21	5	8	6	312
Anxiety Disorders, Depression and Disorders with Early Onset	215	44	15	26	27	22	7	7	6	369
Developmental and Organic (Brain) Disorders	3	1	0	2	1	0	1	0	0	8
Eating Disorders	8	0	0	0	2	0	0	0	0	10
Personality Disorders	27	3	1	0	1	1	1	0	0	34
Substance Use Disorders	106	19	25	17	15	12	12	2	4	212
Other Mental Health Problems	89	9	7	7	9	6	5	1	1	134
Totals	609	127	85	66	64	62	31	18	17	1079

The separation distribution and follow-up for the nine local health areas in the Thompson Cariboo Shuswap are identified in Table 5. The three highest population centres in the Thompson Cariboo Shuswap are Kamloops, Salmon Arm, and the Cariboo Chilcotin. The follow-up distribution frequencies are: Kamloops 440 or

72.2% follow-up of 609, Salmon Arm 108 or 85.0% follow-ups of 127, and the Cariboo Chilcotin 68 or 80.0% follow-ups of 85.

Kamloops has almost four times the number of acute care hospital separations of Salmon Arm, and a follow-up of 440 or 72.2% of 609 frequencies, while Salmon Arm has a follow-up of 108 (85.0%) of 127. A comparison of the follow-up patterns for Salmon Arm and the Cariboo Chilcotin reveal that Salmon Arm has a slightly larger number and a higher follow-up of 108 or 85.0% of 127, while the Cariboo Chilcotin has a follow-up number of 68 (80.0%) of 85 frequencies.

Table 4. Local Health Area versus Follow-up.

TCS - 9 Local Health Areas		Follow-up = frequency (%)		Total
		Yes	No	
NOK	Salmon Arm	108 (85.0%)	19 (15.0%)	127
NOK	Revelstoke	55 (88.7%)	7 (11.3%)	62
TC	Kamloops	440 (72.2%)	169 (27.8%)	609
TC	Cariboo Chilcotin	68 (80.0%)	17 (20.0%)	85
TC	Merritt	55 (83.3%)	11 (16.7%)	66
TC	100 Mile House	50 (78.0%)	14 (22.0%)	64
TC	Lillooet	18 (58.0%)	13 (42.0%)	31
TC	North Thompson	14 (82.3%)	3 (17.7%)	17
TC	South Cariboo	11 (61.1%)	7 (38.9%)	18
Totals		819 (75.9%)	260 (24.1%)	1,079

Merritt has follow-up of 55 (83.3%) of 66, and Revelstoke has follow-up of 88.7%, or 55 of 62. Communities with the lowest frequencies of follow-up are the



smallest in population. Lillooet has 18 or 58.0% follow-up of 31 frequencies, and South Cariboo has 11 or 61.1% follow-up of 18 frequencies as illustrated in Table 5.

#### *4. Number of Separations versus Follow-up*

The distinction between the hospital separations versus the number of individuals who utilized the hospitals was analysed for patterns of diagnostic groups and location. Of the 1,079 separations, there are 804 individuals, and 624 were admitted to hospital only once; the rest were admitted more than once. Figure 7 illustrates the local health area (LHA) distributions of the 624 individuals who only had one hospital separation during the year. The distributions were: 371 or 59.5% of 624 from Kamloops, 56 or 8.9% of 624 from Salmon Arm, 50 or 8.0 % of 624 from Cariboo Chilcotin, 37 or 5.9 % of 624 from Merritt, 36 or 5.8% from 100 Mile House, 27 or 4.3% of 624 frequencies from Revelstoke, 21 or 3.4% from Lillooet, with 13 or 2.1 % of 624 from North Thompson, and 13 or 2.1% from the South Cariboo. The frequency and percentage of follow-up for individuals with only one hospital separation in the fiscal year was 434 or 69.6% of 624 and there was no recorded type of follow-up for the other 190 or 30.4% of 624.

Figure 7. Separation (one time only) by Local Health Area.

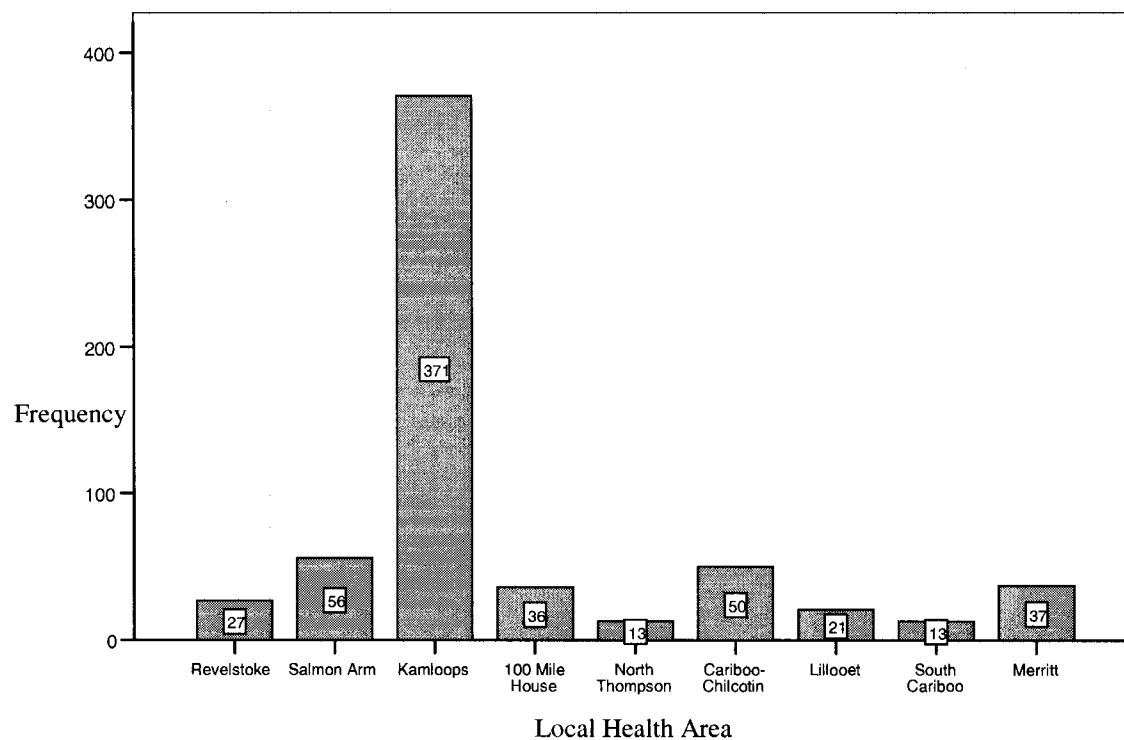
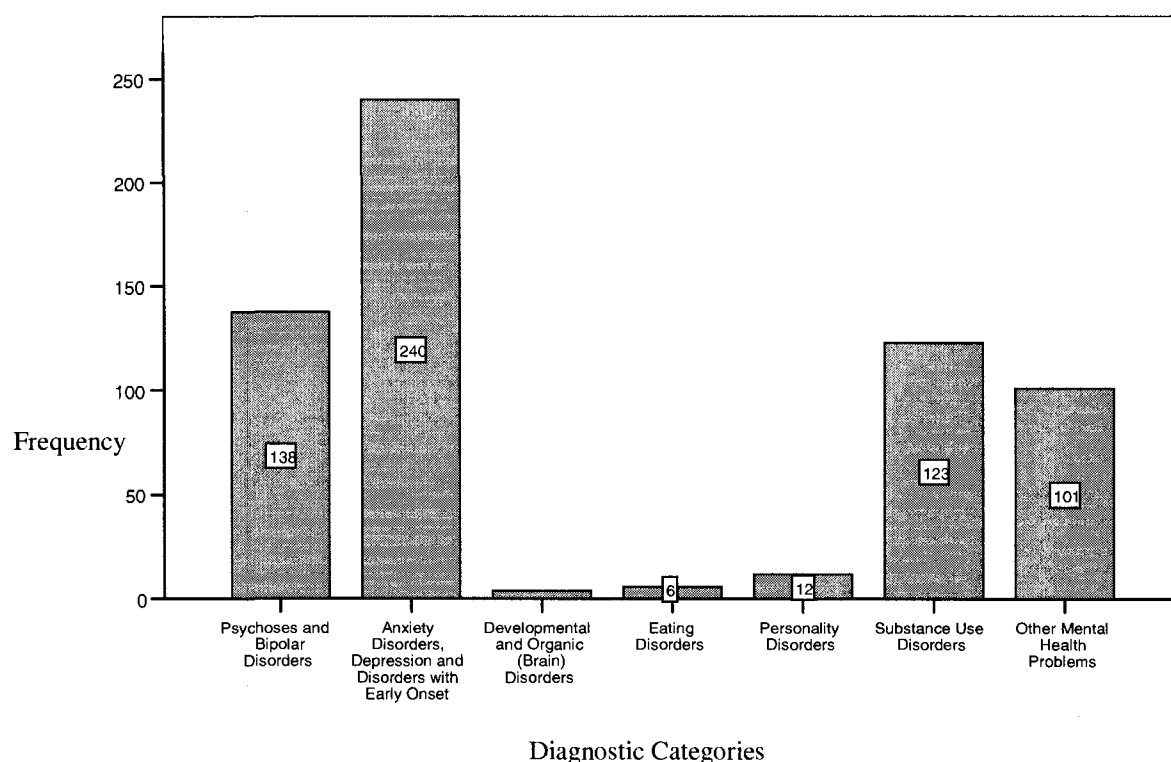


Figure 8 illustrates the broad diagnostic category distribution of the 624 individuals with only one hospital separation. The broad diagnostic categories with the highest frequencies for one separation include anxiety disorders, depression and disorders with early onset (240 or 38.4% of 624), psychoses and bipolar (138 or 22.1% of 624), substance use disorders (123 or 19.7% of 624), other mental health problems (101 or 16.1% of 624), developmental and organic (brain) disorders (four or 0.64% of 624), eating disorders (six or 0.96% of 624), and personality disorders (12 or 1.92% of 624).

Figure 8. Separation (one time only) by Broad Diagnostic Category.



#### *Multiple and Single Separations by Diagnostic Categories*

Table 6 distinguishes between multiple and single separations by the broad diagnostic categories. Individuals with anxiety disorders, depression, and disorders with early onset have the highest number of frequencies with 240 (65.0%) single hospital separations and 129 (34.9%) multiple separations of 369. People identified with the remaining broad diagnostic category groups have the following separations: psychosis and bipolar disorders with 312 frequencies in total and 138 (44.2%) with single separations and 174 (55.7%) multiple separations; substance use disorders with 212 frequencies in total and 123 (58.0%) single separations and 89 (41.9%) multiple separations; other mental health problems with total frequencies of 134, and 101

(75.3%) single separations and 33 (24.6%) multiple separations; personality disorders with a total of 34 frequencies, and 12 (35.2%) single separations and 22 (64.7%) multiple separations; eating disorders with total frequencies of 10, and six (60%) single separations and four (40%) multiple separations; developmental and organic (brain) disorders with a total of 8 separations with four (50%) single and four (50%) multiple separations.

Four diagnostic category groups (anxiety disorders, depression, and disorders with early onset; substance use disorders; other mental health disorders; and eating disorders) have more single than multiple separations. Two categories (psychosis and bipolar disorders; and personality disorders) have more multiple separations and one category (developmental and organic (brain) disorders) has the same amount of single and multiple separations. Other mental health problems has the most single separations at 75.3% whereas personality disorders had the most multiple separations at 64.7%.

Table 5. Frequency of Separation by Diagnostic Categories.

Broad Diagnostic Grouping for Hospital Separations	Total Frequency of Separations	Numbers of Single Separations	Numbers of Multiple (2 +) Separations
Anxiety Disorders, Depression and Disorders with Early Onset	369	240	129
Psychoses and Bipolar Disorders	312	138	174
Substance Use Disorders	212	123	89
Other Mental Health Problems	134	101	33
Personality Disorders	34	12	22
Eating Disorders	10	6	4
Developmental and Organic (Brain) Disorders	8	4	4
Total	1,079	624	455

*Multiple and Single Separations by Type of Follow-up*

Table 7 describes the number of single separations and multiple separations including follow-up by MSP, MHC, and MSP and MHC jointly. MSP has 340 (49.3%) of 689 for single follow-up visits and 349 (50.6%) of 698 for multiple follow-ups. MHC has 259 (49.3%) of 525 follow-up for single separations and 266 (50.6%) of 525 follow-up for multiple separations. Both MSP and MHC jointly have 165 (41.7%) of 395 follow-up for single and 230 (58.2%) multiple separations for follow-up. In comparison of 1,079 separations the total follow-up for single separations is 434 (52.9%) of 819, and follow-up for multiple separations is 385 (47.0%) of 819.

Table 6. Single and Multiple Separations by Type of Follow-up.

Separation	MSP Follow-up	MHC Follow-up	MSP & MHC Follow-up
Single	340	259	165
Multiple	349	266	230
Total	698	525	395

### *Summary*

This analysis explores and describes the number of hospital separations, the frequency of follow-up, and compares the results with diagnostic categories, local health area, and types of community follow-up services. The Ministry of Health's Performance Objective 5.1, Accessibility of Service was used throughout this research, which identifies the overall percentage of 30-day follow-up in the Thompson Cariboo Shuswap HSA as 819 (75.9%) of the 1,079 separations. The 30-day follow-up frequency for MSP is 294, MHC has 130 follow-ups, and MSP and MHC (jointly) have 395 frequencies of follow-up. The frequency of follow-up for each diagnostic category varies generally, as do the broad diagnostic categories compared to the proportion of follow-up by physicians, psychiatrists, and mental health centres. The largest diagnostic group category is for people with anxiety disorders, depression, and disorders for early onset at 369 or 34.2% of 1,079 separations. The patterns and distribution of variables between the acute care hospital locations, the local health areas, the diagnostic category groupings, and the follow-up frequencies are explored through SPSS statistical data analysis. The patterns show evidence of varying proportions of follow-up with each of the variables examined. The final chapter examines these results in the context of existing literature, and

identifies implications and aspects of the findings that could provide meaningful information for changes to both practice and policy.

## CHAPTER FIVE

### Implications and Significance

Research findings in this study have the potential to enhance professional practice by advancing knowledge of follow-up services for individuals with mental illnesses and addictions who have been discharged from acute care hospitals in the Thompson Cariboo Shuswap Health Service Area (TCS-HSA) of Interior Health (IHA). The Ministry of Health Report (2003-04) identifies the necessity to utilize statistical data and human expertise to increase accountability for improved health care. The Performance Agreement Report (Ministry of Health, 2003-04) states “developing common standards, definitions and reliable data collection methods are key elements to guiding good decisions of resource allocation and setting meaningful long term performance targets for individual health authorities” (p. 11). There are implications from this study to improve Performance Measure 5.1, including three social action strategies to assist in the improvement of social work practice:

1. Enhanced discharge follow-up information for specific groups.
2. Accessible community outreach with follow-up services.
3. Improvement of information and data collection systems.

#### *1. Enhanced Discharge Follow-up*

##### *Performance Measure and Frequencies of Non Follow-up*

The rationale for the Ministry of Health’s Performance Measure acknowledges that a “high rate of community and physician follow-up after hospitalization indicates well-coordinated, accessible continuity of care for people



with mental health or addictions diagnoses” (Ministry of Health, 2005, p. 14).

Furthermore, a report by the Ministry of Health recommends that the long-term goal benchmark for follow-up should increase from 80% to 95% (Ministry of Health, 2005). Improving the effectiveness of hospital discharge planning for follow-up support with community health services can potentially reduce the future need for medical services for individuals with acute mental illnesses (Borus & Olendzki, 1985; Kirsh et al., 2005; Lechnyr, 1992).

In British Columbia, the percentage of 30-day follow-up varies among the five Health Authorities with a range of 70-77% for adults below the age of 65 (Jones, 2006). The frequency of 30 day follow-up during fiscal year 2004-05 for the Thompson Cariboo Shuswap HSA was 819 of 1,079 (75.9%) separations. There are 260 of the 1,079 (24%) hospital separations in Thompson Cariboo Shuswap HSA where no follow-up was indicated in this research study. This study and Jones’s findings appear to indicate similar trends in overall follow-up practice. However, further information is necessary in order to develop research to explore and understand the reasons for non-follow-up for people in the Thompson Cariboo Shuswap HSA. It is beneficial to identify reasons and rationale as to why individuals decide not to follow-up with a psychiatrist, physician, or mental health centre, because this information assists in developing discharge follow-up procedures and processes. Supporting the importance of this topic, Sareen, Cox, Afifi, Clara, and Yu (2005) discovered three primary reasons relevant for future study. They suggest: choosing to self-manage, not knowing where to seek help, and avoiding scheduling or attending appointments are the three elements that hinder a person’s motivation to

seek help (Sareen et al., 2005). Through qualitative research, with a sample of individuals who were discharged from acute care hospitals, social workers could explore patients' reasons for choosing to participate in or disregard follow-up services. The resulting information could be utilized to enhance social work practice by developing discharge procedures for follow-up services for individuals hospitalized for acute mental illnesses or addictions.

### *Broad Diagnostic Groups*

To enhance discharge planning and subsequent follow-up services, analysis and research could investigate if a person's type of diagnosis has an association or correlation with the type of therapeutic response (i.e., physician, psychiatrist, mental health clinician, or other). In this study, the highest percentage of follow-up is 262 of 312 (83.9%) separations for individuals within the diagnostic grouping of psychosis and bipolar disorders. The follow-up percentage is within the Ministry of Health long-term goal of 80-95% follow-up. Health Canada (2002) suggests that some types of counselling services can present barriers for individuals with bipolar disorders, which may lead to subsequent challenges in helping individuals understand their diagnoses and affect their participation in early intervention strategies and follow-up services (Andrews et al., 2000). For example, if the counselling approach is culturally insensitive, the client might misunderstand their diagnosis as described by the therapist, which potentially creates barriers for the client to participate in suggested intervention strategies.

A number of factors possibly influencing follow-up rates include the types or models of counselling offered, as well as the demographics of age, gender,

ethnicity, and the accessibility of community services. When developing follow-up services, administrators and planners must consider systemic issues of discrimination, fear, shame, and social stigma facing people with mental illnesses and addictions, as these stigmas affect whether patients access services in the community (Bolden & Wicks, 2005; Government of Canada, 2006; Poole et al., 1997). McNamara et al. (2001), and Minkoff and Cline (2004) also identify the need for awareness of the complexity of developing treatment options for individuals with concurrent mental illness and substance use issues.

The highest frequency of hospital separations in this study is for individuals with the diagnostic category of anxiety disorders, depression, and disorders with early onset, at 369 separations. This diagnostic category has the second highest percentage of follow-up at 299 of 369 (81%). Research from Health Canada (2002) indicates that anxiety disorders are the most common type of mental illness, a finding comparable to this study, as the diagnostic category of anxiety disorders, depression, and disorders with early onset has the highest number of hospital separations in this study. Anxiety is present in 12% of Canadians, and is more prevalent among individuals over 65 years of age (Health Canada, 2002). Health Canada (2002) also notes individuals with anxiety disorders have a tendency to avoid follow-up with formal mental health services, potentially leading to secondary disorders such as substance use. To enhance social work practice and discharge planning, understanding the types of services people with anxiety disorders prefer, as well as referral processes that are conducive to assisting people with anxiety disorders to follow through with appointments would be more beneficial.

Duncan (2003) confirms high rates of hospital utilization for people with bipolar disorder, major depression, and schizophrenia, but does not provide data on follow-up percentages for these diagnostic categories. Health Canada (2002) reports that individuals with depression typically receive services from their community (i.e., non-medical professionals) rather than with health professions or through hospitalization. The results of this study indicate that follow-up is higher with health professionals as there are more visits to psychiatrists and physicians than to community mental health centres. It is beneficial to learn the reasons by which people make these choices, why the majority utilize MSP physician services, and if they find them to be more helpful than community mental health centres. A further question to explore is whether the individual's choice of follow-up is due to shortage of community services, or the stigma of attending a mental health centre. Additionally it can be questioned whether discharged patients are seeking physicians due to medication requests identified in their discharge plans.

Individuals in the diagnostic category groups with the lowest percentages of follow-up include substance use disorders with 135 of 212 (63.6%); other mental health problems with 83 of 134 (61.9%); and organic (brain disorders) with five of eight (62.5%). Identifying the reasons for which people in these three diagnostic category groups have lower rates of follow-up assist health professionals in developing discharge plans that are acceptable to patients. Further, such data helps to provide referral and follow-up services that best meet individual health care and treatment needs. It is unknown whether stigma connected with these diagnostic categories influences the reduced follow-up, if there is a reduced accessibility of

services, or if the services have been provided but not recorded through the systems studied here.

Addictions Information Management System (AIMS) follow-up data information is not collected in data provided to the Ministry of Health. Other possibilities for a lower amount of follow-up by these diagnostic groups may include continued substance abuse, and personal treatment preferences such as peer support (for example, Alcoholics Anonymous or Narcotics Anonymous) or access to private counsellors. Providing options in the types of treatment is important to elevated service rates as Daley and Zuchoff (1999) state, “clients need to feel they have choices in the treatment services offered to them” (p. 34). As they explain, “many clients complain about treatment programs that only offer group sessions” (p. 34) and they “feel cheated when they don’t receive individual counselling” (p. 34). In other cases, Daley and Zuchoff (1999) found that clients prefer a 12 Step program which is a particular approach to group work for addiction recovery. Monti, Barnett, and Mackinnon (2007) report that males with substance dependence that show improved post-treatment outcomes with self-help groups (for example, 12 Step program), result in cost reductions for ongoing treatment. In particular, the report recommends that to improve clinical practice, it is beneficial to promote self-help groups among people with substance use disorders and who are already discharged from hospitals (Monti et al., 2007). Social work practice in Thompson Cariboo Shuswap HSA would benefit from results of a future study on 12 Step programs to understand if individuals attending these programs are similarly successful in treatment outcomes. Social

workers could then use this information to help enhance discharge follow-up (the percentage of follow-up for substance use is 63.6%).

Follow-up at the nine Community Mental Health Centres for people with substance use disorders is low at 31 of 525 (5.9%); this indicates that these individuals are under-represented as substance use disorders comprised 212 of the 1,079 (19.6%) total number of separations. There could be many reasons for this low number of recorded follow-ups for this diagnostic category, including a lack of information systems by contracted or private addictions service providers, as well as geographic and cultural considerations because there are 43 First Nation reserves in the health service area. Individuals living on reserves may visit service providers not recognized by the three Ministry of Health Performance Measures, which only include physicians, psychiatrists, or community mental health centre staff.

With estimates of 50% or more concurrency between substance use and mental illness (United States, 2005), the recorded follow-up percentage for substance use is likely to increase at the Community Mental Health Centres if the data information system is changed to include treatment of concurrent disorders. Consideration of concurrent substance use treatment options in the mental health system should be paramount, as concurrent disorders are complex yet common, given that 50-75% of people with substance use disorders are also affected by mental illnesses (United States, 2005). McNamara et al. (2001) and Minkoff and Cline (2004) assert that concurrent disorders of mental illness and substance use require treatment and follow-up. Assessing types of treatment models and frequencies of follow-up for people with concurrent disorders could assist social work practice when decisions on

treatment options are made. Gathering information on the low follow-up frequencies for individuals with substance use, the drugs used, and the correlation of this with clients' preferred models of treatment or accessibility benefits the creation of patient-centred treatment plans. The majority of substance use clients fail to follow through with their initial appointments, and more than 60% of the dual diagnosis clients fail even to attend the initial evaluation session. Further, patients with cocaine use disorders, and patients initially treated at inpatient units have the lowest percentages of attendance.

Separate from addictions counselling, people with organic (brain) disorders might access other agencies: for example, Community Living Services (CLBC) or Acquired Brain Injury (ABI), neither of which provide data information for the Ministry of Health to determine the percentage of follow-up services occurring. The diagnostic categories of "other mental health problems" presents 83 of 134 (61.9%) follow-up and organic (brain) disorders at five of eight (62.5%) for follow-up. They are lower in number, but also have lower recorded percentages of follow-up. It is unknown whether the individuals with other mental health problems and organic (brain) disorders who do not attend the measured community follow-up services access other supports. If these individuals do not receive follow-up services, the question is raised as to whether they have an increased likelihood of re-admission to the hospital compared to people who do receive community services.

The service shift of linking community follow-up for patients after hospital discharge is a result of cost reduction initiatives to promote shorter length of stays. This paradigm shift stems from cost pressures and new medications. Inpatient

services focus on stabilization and discharge planning to assist people in receiving follow-up services in the community, rather than longer stay in acute medical institutions (Duncan, 2003; Sadock & Sadock, 2003). Reducing the hospital average lengths of stay (ALOS) increases pressure to re-align community services so they are accessible and beneficial for individuals who have acute mental illness and addiction.

Gagne et al. (2006) and Lyons et al. (1997) critically examine high costs not only to the health care system, but also to individuals if mental health services are not reformed. Consequently, due to shifts in shorter length of hospital stay and prevention of re-admissions the availability of community follow-up services is recognized as viable treatment options and as such is more critical in discharge planning (Abas et al., 2003; Andrews et al., 2000; Bolden & Wicks, 2005; Daley & Zuckoff, 1999; Hermann & Mattke, 2004; Lechnyr, 1993).

Andrews et al. (2001) and the Ministry of Health Performance Agreement (2005) both specify that lack of community treatment likely results in patient relapses. For this reason, social work research would benefit from further examination of each of the diagnostic category groups where follow-up information is missing to determine if treatment is accessed at other organizations not currently measured, such as the Canadian Mental Health Association (CMHA) or the Brain Injury Association (ABI). Additionally, research could explore if there is a linkage between type of diagnostic code, community service, and hospital readmission. In practice, this could assist social workers in developing discharge plans more tailored to individual needs, diagnosis, and the patient's preferred referral source. Improving



information system linkages with these organizations and MOH provides better information on the continuum of services being accessed.

### *Hospital Separations and Multiple Admissions*

The amount of follow-up for multiple hospital separations is slightly lower with 385 (47.0%) of 819 whereas single separations have 434 (52.9%) of 819. Separately both MSP and MHC have similar percentages of follow-up for single (49.3%) and multiple separations (50.6%). MSP and MHC (jointly) to some extent have less follow-up with single separations 165 (41.7%) of 395 with additional follow-up for multiple separations at 230 (58.2%). To further expand the descriptive analysis for follow-up there is a distinction of multiple or single separation with broad diagnostic category group.

Comparing the numbers of hospital separations to the broad diagnosis categories provides clarification of the types and frequency of diagnostic categories that physicians give individuals admitted to hospitals for an acute mental illness or addiction crisis. Research on associations among discharge planning, follow-up, and re-admissions is valuable to assist social workers when planning for acute care hospital patients and to help reduce numbers of readmissions. The hospital separations (1,079) show that 455 of 1,079 (42.2%) of the patients have multiple admissions, whereas over half of the patients, 624 of 1,079 (57.8%) have only a single admission in the year studied. The diagnostic category with the highest percentage of individuals admitted only once is anxiety disorders, depression, and disorders with early onset with 240 of 624 (38.4 %). Canadian statistics (CIHI,

2005a) state that the majority of hospital stays include mood disorders (34%), schizophrenia and psychotic disorders (21%), and substance related disorders (14%).

The follow-up percentage in the CIHI Canadian study (2005) for individuals only admitted once is 434 or 69.5% with highest numbers for depressive episode unspecified and schizophrenia. There are lower proportions of follow-up for adjustment disorders, acute stress reaction, and mental and behavioural disorders due to use of alcohol. Individuals with concurrent mental illnesses and substance use, who have been inpatient in psychiatric or addictions treatment programs, often fail to make the transition to community after-care programs, so are presumed to have multiple hospital admissions. This premise is supported by Daley and Zuckoff (1999) who state, “individuals in need of hospitalization or residential treatment typically have substance use or dual disorders of such severity that ongoing follow-up care is needed after initial stabilization, yet many fail to enter a subsequent level of care” (p. 10). Methods to increase follow-up after hospitalization is an important area for future research given the United States National Survey (2005) reveals 50-75% of individuals with mental illness also have substance use disorders (United States Department of Health and Human Sciences, 2005).

The highest percentage of multiple separations are for people with personality disorders at 22 of 34 (64.7%) and psychoses and bipolar disorders at 174 of 312 (55.7%). A two-year study in Victoria, Australia (2005) by Wong and Tye reveals that the majority of people with borderline personality disorders are readmitted to hospital at a rate of 41.5%, which is substantially lower than the average for the Thompson Cariboo Shuswap Health Service Area. In the Victoria Study it was

recommended that further study was needed to understand the reasons for multiple readmission to hospitals. Those individuals within the diagnostic groups of other mental health problems 33 of 134 (24.6%) and anxiety disorders, depression, and disorders with early onset 129 of 369 (34.9%) have the lowest number of multiple separations within the diagnostic categories. With access to data information systems, social workers and health care professionals can potentially recommend types of treatment and improve referral processes for people with dual diagnosis by utilizing the information based on the Ministry of Health Performance Measure 5.1 (2005). This can be achieved by comparing the diagnostic categories to single versus multiple admissions, and taking into account the community services subsequently accessed.

Kessler et al. (2005) suggest that research focus not only on the need for therapeutic support but also the accessibility of services for people with mental health disorders. The descriptive analysis of Performance Measure 5.1 provides information on accessing treatment, but not on the voices of those who request treatment. The research by Kessler et al. (2005) discusses that the majority of people with mental disorders do not receive follow-up services. In the study for 2004-05 for Thompson Cariboo Shuswap, it is unknown what influences the decisions for the people who do not receive services. Cultural considerations and accessibility may have a bearing on a person's choice to follow up with service. As the Thompson Cariboo Shuswap population is about 15% First Nations, it is recommended to study cultural groups, ethnic minorities, and gender differences to understand barriers with accessing treatment (Jones, 2006; Kessler et al., 2005). In consideration of these issues and in support of future research, Kessler et al. (2005) recommend that social work practice

enhance discharge planning by increasing the use of evidence-based initiatives and quality assurance programs to monitor and evaluate follow-up services (for example, Performance Measure 5.1). With this information, research can include surveys of trends for the prevalence and treatment of mental disorders to help improve policy and implementation of funding to capture the needs of those individuals with mental illness and/or addictions who are not receiving services (Kessler et al., 2005).

With regards to social work practice, exploring with clients the factors or experiences influencing their choices not to follow up with treatment can provide direction on how to reduce gaps in service. Reasons for not seeking help can be further analysed by describing any trends and patterns, and then determining if there are any correlations to diagnosis. For example, this study has identified that the highest percentage of multiple hospital separations is for people with personality disorders, and psychoses and bipolar disorders. Research could explore how this is impacted by personal choice and the available follow-up services. Eskedal and Demetri (2006) recommend that research explore the success of short and long-term treatment options as well as gender and diversity issues for individuals with personality disorders. Social work practice can be improved by providing treatment that is more specific and individualized to better meet clients' health care needs (Eskedal & Demetri, 2006). Social workers using this information for case and discharge planning would ideally provide a comprehensive approach when working with acutely ill individuals. Overall, social work practice should embrace cultural sensitivity and awareness when helping clients to access therapeutic support after a

mental illness or addiction crisis to assist in the clients' healing process (Naadmaadwin, 1999).

## *2. Accessible Community Outreach with Follow-up Services*

Community outreach treatment services are integral to recovery after acute care hospital discharges. Research results indicate that an absence of community care plans and post-discharge services results in increased visits to physicians and higher frequencies of medical services (Borus & Olendzki, 1985; Lechnyr, 1992). Even with improved system linkages, there are systemic issues surrounding mental illnesses and addictions, including social stigma and cultural barriers, which would potentially have an impact on personal choice for follow-up services. The Abas et al. (2003) study on psychiatric hospitalizations in New Zealand not only recommends "protocols to ensure early use of effective treatment" (p. 624), but also emphasizes that socio-economic factors affect individuals with severe mental illness who are living with social deprivation, and have a high need for mental health services. Their example, the Maori, the indigenous minority in New Zealand, are overrepresented in acute care hospital stays by 34%, which could be attributed to social and economic deprivation, misdiagnoses and treatment mismanagement (Abas et al., 2003).

Bolden and Wicks (2005) speculate that research should explore how cultural considerations can be incorporated into mental illness and/or addiction diagnostic criteria (DSM IV TR). They also suggest the use of community health care teams is to diagnose and treat mental illness and substance use across cultures. The Report on Mental Illness in Canada (Health Canada, 2002) recognizes this issue and emphasizes consideration be given to "roles and interactions of heredity and environment... and

lived experience in understanding” (p. 22). With the geographic distances, as well as indigenous and diverse cultural minorities in Thompson Cariboo Shuswap Health Service Area, it would be advantageous to study cultural and economic implications and accessibility of community services for mental illnesses and addictions. To enhance accessibility to community services, future research could explore how barriers such as geographic isolation, costs, stigma, cultural considerations, and types of services each impact the frequency of follow-up and re-admissions to hospitals. In turn, social workers could use the research results to develop enhanced policies and procedures to assist hospital patients with help-seeking and the resulting resources needed to access therapeutic support options (i.e., transportation and outreach services).

#### *Type of Follow-up*

Although the variables in this research study are limited in number, the analysis of the three community services provides descriptions on proportions and frequencies of follow-up, plus comparisons across the broad diagnostic categories. The study discovered that the largest number of follow-up services occur with individuals who visit both MSP (physicians, psychiatrists) practitioners and Mental Health Centres. The second largest follow-up group is with people visiting MSP billing physicians only. The lowest follow-up numbers are for individuals attending Community Mental Health Centres only. These findings are supported by the research of Gagne et al. (2006) on Canadian mental health care reform, which states that the majority of people with mental illness and/or addiction prefer to receive treatment from a physician or primary health care team. Sareen et al. (2005) and

Meadows et al. (2002) confirm that individuals with a perceived need for counselling prefer primary care physicians rather than psychiatrists or psychologists.

The B.C. Provincial Quality Indicator Report (Jones, 2006) reveals that of the 3233 individuals in Interior Health (IHA) receiving follow-up services within 30 days, 2852 saw an MSP billing physician or psychiatrist. This provides an IHA regional average of 69% follow-up by physicians, which is the second lowest percentage in the Province of British Columbia. In comparison, the average for the Province of British Columbia is 70%. MSP fee for service billing (which only includes general practitioners and psychiatrists) in the Thompson Cariboo Shuswap HSA shows an overall follow-up percentage of 689 out of 1,079 (63.8%) separations, which is less than the overall IHA percentage of 69%. The MSP physician follow-up rates in other Health Authorities range from a low of 63% at Northern Health, to 70% at Fraser Health and 71% at Vancouver Coastal, to a high of 74% at Vancouver Island Health.

Examining the IHA regional MSP physician follow-up frequencies, Jones (2006) find that of the 3233 individuals who receiving follow-up services within 30 days, 1792 attended a Community Mental Health Centre in the Interior Health region. This amount provides an IHA regional average of 43% follow-up by Mental Health Centres (the second highest) compared to the Province of British Columbia average of 31%. Follow-up in the other regional Health Authorities by Community Mental Health Centres ranges from a low of 9% at Vancouver Island and 19% at Vancouver Coastal, 37% at Fraser Health, to a high of 51% at Northern Health (Jones, 2006).

### *Comparison within MSP Follow-up*

Diagnostic trends identified within MSP-recorded follow-up provide information on people's choices regarding their acute care follow-up services. Subgroup analysis on the diagnostic category groups reveals that, when compared to Mental Health Centres, the MSP data reports the substance use disorders follow-up as 120 of 212 (56.6%). This category has the second lowest percentage of recorded community follow-up. The lowest percentage follow-up category group was for other mental illnesses, 66 of 134 (49.2%). Of the individuals who went to both psychiatrists and physicians (general practitioners) for follow-up, the most common diagnostic categories seen are anxiety disorders, depression and disorder with early onset with 36 of 58 (62%) follow-up, and psychosis and bipolar disorders with 20 of 58 (34.4%).

The highest numbers and percentages for MSP physician follow-up are for anxiety disorders, depression, or disorders with early onset, with 427 of 531 (80.41%). Steele, Dewa, and Lee (2007) found in their Canadian research study within a one-year period, of individuals with anxiety or affective disorder, 33.2% visited a family doctor, 14.8% visited a psychiatrist, 11.3% visited a social worker and 10.1% visited a psychologist, providing an overall one-year follow-up of 69.4%. Although the follow-up percentage is lower than the Thompson Cariboo Shuswap HSA study, the trend towards more individuals seeing a physician for anxiety or affective disorder is similar.

In comparison, psychiatrists have the highest follow-up for psychosis and bipolar disorders, 142 of 264 (53.78%) separations. Anxiety disorders, depression,



and disorders with early onset have a much higher follow-up with general practitioners, 427 of 531 (80.41%) separations, than psychiatrists 140 of 531 (26.36%). There is a noteworthy difference between general practitioners and psychiatrists regarding follow-up for people with the substance use disorders category. Psychiatrists have a very low follow-up of four of 111 (3.6%) separations for substance use follow-up, whereas general practitioners have the highest percentage of follow-up with individuals in this diagnostic category: 108 of 110 (98.18%) separations.

As noted, there are wide ranges of numbers and percentages of follow-up depending on diagnostic category groupings. This could be due to a range of factors that may potentially influence post-discharge treatment options, such as health insurance coverage, accessibility, culture, and stigma. Social work practice would be enhanced by further studies on whether mental illness and/or addiction diagnoses have a bearing on the type of follow-up services that individuals have chosen. This information could provide social workers with additional knowledge for assisting clients in making choices, which could improve outcomes and potentially reduce hospital readmissions or stays. Manthei (2006) expresses that there is minimal knowledge about the reasons people choose one type of counselling over another, but noted that people often participate in services that have been previously successful for them.

### *Hospitals and Follow-up Frequencies*

The data analysis in this study provides an overview of the eight hospitals in the Thompson Cariboo Shuswap HSA across the diagnostic categories used by the

Ministry of Health, and the follow-up for each. This topic extends beyond the scope of this study, but some preliminary information on specific hospitals in the Thompson Cariboo Shuswap HSA is located in Appendix D. The Thompson Cariboo Shuswap hospitals have similar frequencies of separation and follow-up for individuals with anxiety disorders, whereas substance use have low follow-up throughout the health service area. The exception was at 100 Mile Hospital with the highest follow-up of 11 of 13 (78.6%) for substance use. The highest numbers of separations are from Royal Inland Hospital in Kamloops. Of these, the highest percentage of inpatients is for the diagnostic category of anxiety disorders, depression and disorders with early onset; second is psychoses and bipolar disorders; third substance use disorders; and fourth other mental health problems.

Canadian research by Steele et al. (2007) reports that “only 32% of individuals with a mental health disorder in one year period spoke to a health professional” (p. 202). Analyzing a specific diagnostic category finds that one-fifth of people diagnosed with anxiety or an affective disorder disclosed that their mental health needs were not met. Results indicate that acceptability of health care is the basis for unmet needs in mental health services in Canada (Steele et al., 2007). Acceptability was defined as “individuals [who] choose to not seek help for reasons unrelated to cost or availability” (p. 204). Recommendations to increase mental health services include designating targeted approaches for service delivery and developing protocols between large employers and service providers to “improve equitable distribution of mental health services” (Steele et al., 2007).

A spectrum of mental health services for individuals, ranging from protocols with employers to development of housing support for mentally ill people is necessary. Young et al. (2005) stress that individuals with mental illness accessing emergency hospital services are extremely vulnerable because frequently they are homeless and isolated from family and friends. As a result, routines and following up with community therapeutic interventions are not often practical for homeless clients. Given the scope of unmet mental illness and/or addiction services needs, it is recommended that follow-up services (and social work practice) need to be flexible, accessible, and with a diverse range of services to provide outpatient support for acutely ill individuals (Young et al., 2005).

#### *Local Health Areas*

Trends and patterns of follow-up for local health areas (LHAs) in the Thompson Cariboo Shuswap HSA are analysed to identify the scope of follow-up services, with the view that geographic location impacts the continuum of care for people discharged from acute care hospitals. Due to limitations in the data, it is unknown whether there is a correlation between the nine local health areas in the Thompson Cariboo Shuswap and the amount of follow-up. Madianos et al. (1999) find that social isolation and population density may have an impact on the frequency of treatment for individuals with psychiatric illness. Another study notes that, in rural communities, transportation challenges and the resulting costs contribute to gaps in community follow-up and develop barriers to the referral processes (Lyons et al., 1997). Ontario's Mental Health Hospital Report acknowledges that approximately half of the patients discharged from hospitals receive mental health

services within 30 days, and that there are fewer follow-ups in Northern Ontario due to fewer services, “longer distances, inefficient referral or connection procedures, or use of community based programs rather than fee-for-service professionals” (Lin et al., 2005, p. 50).

The northern rural conditions in the Ontario report are considerations for further study in the Thompson Cariboo Shuswap HSA, given the geographic distances, variation in population density and gaps in data collection systems that exist. Recognizing the issues facing rural communities in British Columbia, the Simon Fraser University Report (2006) recommends that services be in close proximity to the population served, and to be provided in a timely manner after hospital discharge. Identification of these issues and subsequent planning on the evaluation of this follow-up performance measure in smaller rural communities may assist in improving follow-up services (British Columbia, 2006).

The study results on follow-up provided areas for future research to understand reasons clients choose follow-up or not, and identify subsequent recommendations for enhancing community services for Performance Measure 5.1 (physician, psychiatrist and mental health centres). For example, the diagnostic category group of anxiety disorders, depression, and disorders with early onset has the greatest number of hospital separations and 129 of 369 people (34.9%) with multiple hospital admissions. Steele et al. (2007) reveal that lower socio-economic members of society “may face significant challenges in seeking treatment when they are suffering from anxiety or depression” (p. 204). To improve outreach services and social work practice for this specific population, Steele et al. (2007) recommend

development of protocols with large employers to reduce barriers. In the Thompson Cariboo Shuswap HSA there is the potential to create protocols with Ministry of Employment and Income Assistance (MEIA), hospital services, and community services by developing partnerships to reduce these barriers associated with “acceptability” (Steele et al., 2007) and improve follow-up frequencies.

Discussion on accessible community follow-up, and challenges associated with rural social work including geographic distances, isolation, economic hardship and cultural implications can be explored through research specifically related to post-discharge services from acute care hospitals. In support of community social work practice, the promotion of protocols and procedures with government organizations and employers may assist individuals with acute mental illnesses and addictions and their families to access affordable health services, which can potentially reduce the need for future hospital readmissions.

### *3. Improving Information and Data Collection Systems*

The information data collection systems accessed by the Ministry of Health to measure the Health Authority’s compliance with the follow-up Performance Indicator include the following: the Discharge Abstract Database (DAD), the Client Patient Information Management System (CPIM), the Medical Services Plan (MSP), and the Mental Health Minimum Reporting Requirements (MRR), which includes Meditech. These systems provide the statistical information for this study. Several recommendations related to these information systems can assist in improving social work practice and strengthen future research studies.

One limitation to obtaining data collected by information systems is the procedures used by Community Mental Health Centres. The Ministry of Health does not require clients' diagnoses to be registered until the time the client file is closed. As a considerable percentage of client referrals to Community Mental Health are due to major mental illnesses, these client files potentially remain open for several years, with no diagnostic codes entered during the period of service. This practice is reflected in the study's finding that, of the 525 separations from the acute care hospital that were referred to Community Mental Health Centres, 233 referrals (44.3%) did not have a diagnosis registered at the Mental Health Centre for the data collection cut-off point for 30-day follow-up (H.Reiben, personal communication, August, 2006).

Treatment plans cannot be developed without an initial assessment and diagnosis. As such, a recommendation for future practice analysis is for Community Mental Health Centre social workers and nurses to identify and record, on Meditech, the diagnostic categories of individuals accessing mental health services at the time of intake. Researchers can then compare the 30-day follow-up at Community Mental Health Centres (CMHC) to the diagnostic categories of individuals discharged from acute care hospitals. For example, the highest numbers of 30-day follow-up at CMHC are for other mental health problems at 159 of 525 (30.2%), psychosis and bipolar disorders at 51 of 525 (9.7%) and anxiety disorders, depression, and disorders with early onset presenting a frequency of 48 of 525 (9.1%).

Since fiscal year 2004-05, some rural Community Mental Health Centres and mental health facilities in the Thompson Cariboo Shuswap HSA have installed

Meditech (see Appendix A) client computer systems. This information technology increases the amount of data recorded and provides more accurate information on the frequency and types of follow-up services provided to individuals according to the Ministry of Health Performance Measures.

The Interior Health Authority and the Ministry of Health could potentially increase accuracy of follow-up information by implementing data collection systems with contracted addiction agencies. Currently, contracted service providers do not have an electronic method to collect data to interface with the Ministry of Health measures for 30-day follow-up. As noted in this study, the diagnostic category of substance use has one of the lowest recorded percentages of follow-up, possibly due to this gap in the data collection systems. If an information system is put in place with the contracted addiction services and self-help groups, information on where follow-up is occurring would then be available and permit, more in-depth analysis of the types of addiction treatment occurring for various forms of substance and alcohol use.

Recommendations to improve information systems include the documentation of diagnostic codes at mental health centres at the time of intake, and provide data collection systems for contracted agencies and rural outposts on follow-up services. Social work practice would be enhanced by possessing a system that more accurately reflects workload, and provides information to support current treatment plans or initiatives to develop new services to increase follow-up. Research projects, as mentioned, could then provide an evaluation to determine if these suggestions would provide richer data source for analysis.

### *Concluding Comments*

This research study illustrates that people diagnosed with mental illness and/or addiction have varying rates of follow-up with general practitioners, psychiatrists, and/or mental health centres. It raises questions about why these varying rates of follow-up occur, and the potential impact these varying rates of follow-up have on people's health and well-being. There is no information in this study to determine on what basis individuals decide to accept community referrals from their acute care hospital providers, or whether they have any prior experience with the mental health and addiction service continuum.

The Provincial Quality Indicator Report (British Columbia, 2006) states, "an important next step will involve concerted efforts to improve the availability of data sources to inform quality measures in mental health and addictions services, particularly those that can provide information about outcomes and quality of life of individuals" (p. 3). Conceivably, a study on 30-day follow-up for Thompson Cariboo Shuswap HSA incorporating the research data for 2004-05 and comparing these findings to the frequency in the following years (2005-06, 2006-07) can assist in confirming types of follow-up occurring with the various diagnostic category groupings, and the utilization of addiction and mental health services by each and if there are any changes over time. The purpose is to define areas achieving the Performance Measure targets and identifying those that need further improvement. As Perrin and Koshel (1997) emphasize, performance measures of mental illnesses and addictions should be subdivided to focus on high risk populations, as "homeless individuals are particularly vulnerable to discontinuity of care after discharge" (Lin et



al, 2005, p. 50). It is suggested that future research should take into account how socioeconomic issues and high risk lifestyles impact the frequency of follow-up service and performance measure targets. Developing discharge plans and follow-up services that are unique for the individual and tailored to their diagnosis, culture, and lifestyle with acknowledgement for preferred style of treatment plan then enhances social work practice.

This study is an early step in providing an analysis of the mental illness and/or addiction system in a Health Service Area in British Columbia. It examines follow-up on the numbers of acute care hospitalizations occurring in a one-year period, and the diagnostic category groupings used by the Ministry of Health for mental illnesses and addictions. The study analyses the data collected to review the connections between the acute care hospitalizations and three forms of community follow-up (physician, psychiatrist, and community mental health centre). It is thought that improved data collection systems that incorporate demographic information and cultural considerations provides information that improves service delivery options and enhances social work practice. This study illustrates that in this particular health service area, there are differences in proportion of follow-up between the seven diagnostic categories, as well as variances between communities. More information is needed on the profiles of people who have experienced acute mental illnesses and/or addiction disorders to understand the trends and service needs for this population.

## REFERENCES

- Abas, M., Vanderpyl, J., Prou, L.T., Kydd, R., Emery, B., & Foliaki, S.A. (2003). Psychiatric hospitalization: reasons for admission and alternatives to admission in South Auckland, New Zealand. *Australian and New Zealand Journal of Psychiatry*, 37, 620-625.
- Abe-Kim, J., Gong, F., & Takeuchi, D. (2004). Religiosity, spirituality, and help-seeking among Filipino Americans: Religious clergy or mental health professionals? *Journal of Community Psychology*, 32 (6), 675-689.
- Adelman, J. (2003). *Study in blue and grey police interventions with people with mental illness: A review of challenges and responses*. Vancouver, BC: CMHA.
- Adrian, M., Ogbrone, A., Rankin, J., Ferguson, B., & Jull, P. (1994). Community-based facilities may be replacing hospitals for the treatment of alcoholism: the evidence from Ontario. *American Journal of Drug & Alcohol Abuse*, 20(4), 529-545.
- Agosti, V., Nunes, E., Stewart, J., & Quitin, F. (1991). Patient factors related to early attrition from an outpatient research clinic: A preliminary report. *International Journal of Addictions*, 26, 327-334.
- Allan, C. (1987). Seeking help for drinking problems from a community based voluntary agency: patterns of compliance amongst men and women. *British Journal of Addiction*, 82, 1143-1147.
- Anthony, K. H. (2008). Helping partnerships that facilitate recovery from severe mental illness. *Journal of Psychosocial Nursing*, 46, 25-33.
- Anthony, W., Chamberlin, J., Farkas, M., & Gagne, C. (2005). Implementing recovery orientated evidence based programs: identifying the critical dimension. *Community Health Journal*, 41(2), 141-158.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorder (text revision)*. Washington, DC: Author.
- American Psychiatric Publishing. *DSM-IV Classification (with ICD Codes)*. Lifelong learning in Psychiatry. Retrieved June 16, 2008, from <http://www.psychiatryonline.com>
- Andrews, G., Goldner, E., Parikh, S., & Bilsker, D. (Eds.). (2000). *Management of Mental Disorders*. World Health; MHECCU. UBC.

- Andrews, G., Issakidis, C., & Carter, G. (2001). Shortfall in mental health service utilization. *British Journal of Psychiatry*, 179, 417-425.
- Australian Institute for Primary Care. (1996). *Victoria's mental health service: The framework for service delivery better outcomes through mental health services*. Victoria, Australia: State Government Department of Human Services.
- Bellus, S., Donovan, S., Kost, P., Vergo, J., Gramse, R., Bross, A., et al. (2003). Behaviour change and achieving hospital discharge in persons with severe, chronic psychiatric disabilities. *Psychiatric Quarterly*, 74 (1), 31-42.
- Bolden, L., & Wicks, M.N. (2005). Length of Stay, admission types, psychiatric diagnoses, and the implications of stigma in African Americans in the nationwide inpatient sample. *Mental Health Nursing*, 26, 1043-1059.
- Booth, B., Cook, C., & Blow, F. (1992). Comorbid mental disorders in patients with AMA discharges from alcoholism treatment. *Hospital and Community Psychiatry*, 43, 730-731.
- Borus, J.F., & Olendzki, M.C. (1985). The offset effect of mental health treatment on ambulatory medical care utilization and charges. *Archives of General Psychiatry*, 42, 573-580.
- British Columbia. (2005). *30 day follow-up report data for select Interior Health Authority hospitals: Fiscal 2003/04 and fiscal 2004/05*. Ministry of Health, Information Management.
- Burn, W.K., Davies, K, N., McKenzie, F.R., & Brothwell, J.A. (1993). The prevalence of psychiatric illness in acute geriatric admissions. *International Journal of Geriatric Psychiatry*, 8, 171-174.
- Byers, E., & Cohen, S. (1979). Predicting patient outcome: The contribution of prehospital, in hospital, and posthospital factors. *Hospital and Community Psychiatry*, 30, 327-331.
- Canadian Institute for Health Information. (2005). *Hospital mental health services in Canada 2002-2003*. Ottawa, ON: CIHI.
- Canadian Institute for Health Information. (2005). *One in seven hospitalizations in Canada involve clients diagnosed with mental illness*. Retrieved July 20, 2006, from [http://secure.cihi.ca/cihiweb/dispPage.jsp?cw\\_page=media\\_12oct2005\\_e](http://secure.cihi.ca/cihiweb/dispPage.jsp?cw_page=media_12oct2005_e)
- Canadian Institute for Health Information. (2006). *Cihidirections.cis*. Getting the story on mental health services. *CIHI*, (13), 3.

- Canadian Mental Health Association. (2005). *Community education and training*. Retrieved August 22, 2008 from <http://vancouver-burnaby.cmha.bc.ca/services/cet>
- Carey, K., & Carey, M. (1990). Enhancing the treatment attendance of mentally ill chemical abusers. *Journal of Behavioral Therapy & Experimental Psychiatry*, 21, 205-209.
- Casti, J.L. (1989). *Paradigms lost: Images of man in the mirror of science*. New York: William Morrow.
- Chamberlin, J. (1998). Speaking out – citizenship rights and psychiatric disability. *Psychiatric Rehabilitation Journal*, 21(4), 405-408.
- Citizens for Mental Health. (2003). *Mental Illness in Canada (backgrounder)*. Canadian Mental Health Association.
- Cooper, B. (1987). Psychiatric disorders among elderly patients admitted to hospital medical wards. *Journal of the Royal Society of Medicine*, 80, 13-16.
- Concurrent Disorders Ontario Network. (2005). *Concurrent disorders policy framework*. Toronto: Author. Retrieved March 24, 2007, from [ofcmhap.on.ca/files/-CDpolicy%20final.pdf](http://ofcmhap.on.ca/files/-CDpolicy%20final.pdf)
- Cramer, K.M. (1999). Psychological antecedents to help-seeking behaviour: A reanalysis using path modelling structures. *Journal of Counselling Psychology*, 46(3), 381-387.
- Cusack, J., Deane, F., Wilson, C., and Ciarrochi, J. (2006). Emotional expression, perceptions of therapy, and help-seeking intentions in men attending therapy services. *Psychology of Men and Masculinity*, 7(2), 69-82.
- Daley, D., & Zuckoff, A. (1998). Improving compliance with initial outpatient session among discharged inpatient dual diagnosis clients. *Social Work*, 43, 470-473.
- Daley, D., & Zuckoff, A. (1999). *Improving treatment compliance: Counseling & systems strategies for substance abuse & dual disorders*. Minnesota: Hazelden.
- Davis, S. (2006). *Community mental health in Canada: Policy, theory, and practice*. Vancouver: UBC Press.
- Deegan, P.E. (2005). The importance of personal medicine: A qualitative study of resilience in people with psychiatric disabilities. *Scandinavian Journal of Public Health*, 33, 29-39.

- Deegan, P.E. (1997). Recovery and empowerment for people with psychiatric disabilities. *Social Work in Health Care*, 25 (3), 11-24.
- Dietz, C.A. (2000). Responding to oppression and abuse: A feminist challenge to clinical social work. *AFFILIA*, 15(3), 369-389.
- Duncan, D. (2003). *Acute care utilization and self-sufficiency report*. IHA, Mental Health and Addictions Services. Kelowna, BC.
- El-Mallakh, R., James, T., Khan, T., Katz, M., McGovern, S., Nair, S., et al. (2004). Follow-up after inpatient psychiatric hospitalization with partial control of the system responsive variable. *Psychiatry*, 67 (3), 294-298.
- Eskedal, G. A., & Demetri, J. A. (2006). Etiology and treatment of cluster C personality disorders. *Journal of Mental Health Counseling*, 28 (1), 1-17.
- Ford, R., Beadsmoore, A., Ryan, P., Repper, J., Craig, T., & Muijen, M. (1995). Providing the safety net: Case management for people with a serious mental illness. *Journal of Mental Health*, 4 (1), 91-97.
- Gagne, M., Dudgeon, S., & Kates, N. (2006). Primary mental health care reform: Catch the wave. *Healthcare Management Forum*. 28-33.
- Gannon, M., Meagher, D., and Watters, L. (1997). New long-stay patients-two years later. *Irish Journal of Psychological Medicine*, 14, 24-25.
- Glasby, J., & Lester, H. (2004). Delayed hospital discharge and mental health: the policy implications of recent research. *Social Policy and Administration*, 38 (7), 744-757.
- Goffman, E. (1961). *Asylums: Essays on the social situation of mental patients and other inmates*. New York: Anchor.
- Goldner, E. M., Tompkins, J., & Cardiff, K. (2001). *Mental health on-line: A case for information management*. Mheccu: University of British Columbia.
- Government of Canada. (2006). *The human face of mental health and mental illness in Canada*. Editorial Board for Public Health Agency of Canada, Mood Disorders of Canada, Health Canada, Statistics Canada, and Canadian Institute for Health Information.
- Groveman, A., Nathan, P., Fagley, N., & Brown, E. (1986). Impediments to psychiatric hospital discharge: What different professional groups think. *Journal of Clinical Psychology*, 42(2), 377-382.

- Hader, J. M. (1989). *Goal setting initiatives in health promotion: A background paper on the process of establishing provincial health goals in Saskatchewan*. (Department of Community Health and Epidemiology). Saskatoon, SK: University of Saskatchewan.
- Harman, J., Cuffel, B., & Kelleher, K. (2004). Profiling hospitals for length of stay for treatment of psychiatric disorders. *The Journal of Behavioural Health Services & Research*, 31 (1), 66-74.
- Health Canada. (1998). *Review of best practices in mental health reform*. Ottawa: Health Canada.
- Health Canada. (2002). *A report on mental illnesses in Canada*. Ottawa.
- Health Systems Research. (1997). *Review of best practices in mental health*. Federal/Provincial/Territorial Advisory Network on Mental Health. Clarke Institute of Psychiatry.
- Hermann, R., Mattke, S., & Members of the OECD Mental Health Care Panel. (2004). *Selecting indicators for the quality of mental health care at the health systems level in OCED countries*. Paris, France: OECD.
- Hochstadt, N., & Trybula, J., Jr. (1980). Reducing participation in substance abuse treatment using an incentive system. *Journal of Substance Abuse Treatment*, 8, 133-134.
- Information Resource Management: Knowledge, Management & Technological Division. (2005). *30 day follow-up report data for select Interior Health hospitals fiscal 2003/2004 and fiscal 2004/2005*. Ministry of Health.
- Interior Health. (2003). *The Foundation: Creating stable ground for change. Mental Health Services strategic development plan*. Interior Health: Province of British Columbia.
- Interior Health. (2004). *Report on Aboriginal health*. Interior Health: Province of British Columbia.
- Interior Health. (2005). *Guide To mental health and addiction services*. Interior Health: Province of British Columbia.
- James, R.J., & Gilliland, B.E. (2001). *Crisis intervention strategies*. Toronto: Nelson Thompson Learning.
- Johnson, V. E. (1986). *Intervention: How to help someone who doesn't want help*. Minneapolis: Johnson Institute Books.

- Jones, W. (2006). *BC provincial quality indicator project analysis: Characteristics of those not meeting the 30 day follow-up criteria (draft)*. Centre for Applied Research in Mental Health and Addictions. Vancouver: Simon Fraser University.
- Kadden, R., & Mauriello, I. (1991). Enhancing participation in substance abuse treatment using an incentive system. *Journal of Substance Abuse Treatment*, 8, 133-134.
- Kessler, R. C., Demler, O., Frank, R. G., Olfson, M., Pincus, H. A., Walters, E. E., et al. (2005). Prevalence and treatment of Mental Disorders, 1990 to 2003. *New England Journal of Medicine*, 24, 2515-2523.
- Kirby, M.J.L., & Keon, W.J. (2006). *Out of the shadows at last: Transforming mental health, mental illness and addiction services in Canada*. Final Report of the Standing Committee on Social Affairs, Science and Technology. Ottawa: 38<sup>th</sup> Parliament.
- Kirsh, B., Krupa, T., Horgan, S., Kelly, D., & Carr, S. (2005). Making it better: Building evaluation capacity in community mental health. *Psychiatric Rehabilitation Journal*, 28 (3), 234-241.
- Klinkenberg, W., & Calsyn, R. (1996). Predictors of receipt of aftercare and recidivism among persons with severe mental illness: A review. *Psychiatric Services*, 47, 487-496.
- Kloss, J., & Lisman, S. (2003). Clinician attributions and disease model perspectives of mentally ill, chemically addicted patients: A preliminary investigation. *Substance use and misuse*, 38, (14), 2097-2107.
- Lechnyr, R. (1992). Cost savings and effectiveness of mental health services. *Journal of the Oregon Psychological Association*, 38, 8-12.
- Lechnyr, R. (1993). Cost savings of mental health services. *EAP Digest*, 22-47.
- Lee, J. (2007, January 5). Ex-health official's proposals criticized. *The Vancouver Sun*, pp. B1, B8.
- Lin, E., Durbin, C., Koegl, M., Murray, T., Tucker, I., Daniel, F., et al. (2005). *Hospital report 2004 mental health*. Joint Initiative of the Ontario Hospital Association and the Government of Ontario, Toronto: Hospital Report Research Collaborative, University of Toronto: Ontario.
- Links, P. (2005). Suicide risk peaks in first week of psychiatric hospitalization and post-discharge. *Evidence-based mental health*, 8(4), 114-114.

- Lyons, J. S., Howard, K. I., O'Mahoney, M.T., & Lish, J.D. (1997). *The measurement & management of clinical outcomes in mental health*. New York: John Wiley & Sons, Inc.
- Madianos, M., Zacharakis, C., Tsitsa, C., & Stefanis, C. (1999). Geographical variation in mental hospital discharges in Greece and socioeconomic correlates: a nationwide study (1978-1993). *Soc Psychiatry Psychiatr Epidemiol*, 34, 477-483.
- Manthei, R. J. (2006). Clients talk about their experiences of seeking counseling. *British Journal of Guidance & Counselling*, 34, (4), 519-538.
- Marlatt, G., Baer, J., Donovan, D., & Kivlahan, D. (1988). Addictive behaviours: etiology and treatment. In M.R. Rosenzweig & L.W. Porter (Eds.), *Annual review of Psychology*, 39, 223-252. Palo Alto: Annual Reviews, Inc.
- Matas, M., Staley, D., & Griffin, W. (1992). A profile of the noncompliant patient: A thirty-month review of outpatient psychiatry referrals. *General Hospital Psychiatry*, 14, 124-130.
- McNamara, C., Schumacher, J. E., Milby, J. B., Wallace, D., & Usdan, S. (2001). Prevalence of nonpsychotic mental disorders does not affect treatment outcome in a homeless cocaine-dependent sample. *AM. J. Drug Alcohol Abuse*, 27(1), 91-106.
- Meadows, G., Burgess, P., Bobevski I, Fossey, E, Harvey C., & Liaw, S.T. (2002). Perceived need for mental health care: Influence of diagnosis, demography and disability. *Psychological Medicine*, 32, 299-309.
- Meichenbaum, D., & Turk, D. (1987). *Facilitating treatment adherence: A practitioner's guidebook*. New York: Plenum Press.
- Mental Health Commission. (2007). *New body to improve quality of life for Canadians suffering with mental illness*. Author. Retrieved January 20, 2008, from [http://www.mentalhealthcommission.ca/documents/PMsRelease\\_english.pdf](http://www.mentalhealthcommission.ca/documents/PMsRelease_english.pdf)
- Milam, J. R., & Ketcham, K. (1983). *Under the influence: A guide to myths and realities of alcoholism*. New York: Bantam Books.
- Ministry of Health. (2003/2004). Health Authority Performance Agreement Report. Retrieved June 1, 2006, from (IHA website). [http://www.healthservices.gov.bc.ca/socsec/pdf/ha\\_report0405.pdf](http://www.healthservices.gov.bc.ca/socsec/pdf/ha_report0405.pdf)



- Ministry of Health. (2005). *Performance Agreement between the Ministry of Health Services and the Interior Health Authority: April 1, 2005 to March 31, 2006. March 1, 2005*. Retrieved June 1, 2006, from (IHA website).  
<http://www.interiorhealth.ca/NR/rdonlyres/B39A2C47-AE5C-412C-B4C2-6EF70026E52E/2535/IHA0506FinalperfagreementMar106.pdf>
- Ministry of Labour and Citizens' Services. (2005). *British Columbia census metropolitan area and census agglomerations population estimates, 2001-2005*. Retrieved October 14, 2006, from  
<http://www.bcstats.gov.bc.ca/data/pop/pop/rd/cma0105.asp>
- Minkoff, K., & Cline, C. A. (2004). Changing the world: The design and implementation of comprehensive continuous integrated systems of care for individuals with co-occurring disorders. *Psychiatric Clinics of North America*, 27(4), 727-743.
- Moller-Leimkuhler, A. M. (2002). Barriers to help-seeking by men: A review of sociocultural and clinical literature with particular reference to depression. *Journal of Affective Disorders*, 71, 1-9.
- Monti, P. M., Barnett, N., Mackinnon, S. V. (2007). Integrated therapy for co-occurring bipolar/substance abuse. *The Brown University Digest of Addiction Theory & Application*, 26, 1-1.
- Mood Disorders Society of Canada. (2007). *Quick facts: Mental illness and addictions in Canada* (2<sup>nd</sup> ed.). Guelph: MDSC.
- Munson, C. E. (2001). *The mental health diagnostic desk reference* (2<sup>nd</sup> ed.). New York: The Haworth Press.
- Naadmaadwin, N. K. (1999). Seeking Mino-pimatasiwin (the good life): An Aboriginal approach to social work practice. *Native Social Work Journal*, 2(1), 91-112.
- National Committee for Quality Assurance. (2005). *The state of health care quality*. Washington, DC.
- Neuman, W. L. (2003). *Social research methods – Qualitative and quantitative approaches* (3<sup>rd</sup> ed.). Boston: Pearson Education.
- NICHCY. (2007). Autism and pervasive development disorder. National Dissemination Center for Children with Disabilities. Retrieved May 14, 2007, from  
<http://www.nichcy.org/pubs/factshe/fs1txt.htm#howcommonNICHCY>

- Norcross, J. C., & Aboyoun, D. C. (1994). Self-change experiences of psychotherapists. In: Brinthaup, T. M. & Lipka, R. P. (Eds.), *Changing the self*. Albany: State University of New York Press.
- O'Toole, T., Strain, E., Wand, G., McCaul, M., & Barnhart, M. (2002). Outpatient treatment entry and health care utilization after a combined medical/substance abuse intervention for hospitalized medical patients. *General Intern Medicine*, 17, 334-340.
- Paul, G., & Lentz, R. (1977). *Psychosocial treatment of chronic mental patients: Milieu versus social learning programs*. Cambridge, MA: Harvard University Press.
- Perrin, E.B., & Koshel, J. J. (Eds.). (1997). *Executive summary assessment of performance measures for public health, substance abuse, and mental health*. National Research Council. National Academy Press: Washington DC. Retrieved July 17, 2006, from <http://books.nap.edu/catalog/5806.html>
- Peters, A. C. (1984). Disease or morality. *Journal of the Massachusetts Dental Society*, 33, 167-170.
- Poole, N., Pearce, D., Hall, N., Ballem, P., Swartz, D., Mercurio, A., et al. (1997). *Alcohol and other drug problems and B.C. women*. A report to the Minister of Health from the Minister's Advisory Council on Women's Health. Government of British Columbia.
- Ritsher, J. B., McKellar, J. D., Finney, J. W., Otilingam, P. G., & Moos, R. H. (2002). Psychiatric comorbidity, continuing care and mutual help as predictors of five-year remission from substance use disorders. *Journal of Studies on Alcohol*, 63(6), 709-716.
- Rosenfield, A. H. (1993). Health care reform for Americans with severe mental illnesses: Report of the National Advisory Mental Health Council. *American Journal of Psychiatry*, 150, 1447-1465.
- Rubin, A., & Babbie, E. (1997). *Research methods for social work*. (3<sup>rd</sup> ed.). Pacific Heights, CA: Brooks/Cole.
- Rubin, A., & Babbie, E. (2005). *Research methods for social work*. (5<sup>th</sup> ed.). Belmont, CA: Brooks/Cole-Thompson Learning.
- Sadock, B., & Sadock, V. (2003). *Synopsis of Psychiatry: Behavioural Sciences/Clinical Psychiatry* (9th ed.). New York: Lippincott, Williams & Wilkins.

- Sareen, J., Cox, B. J., Afifi, O. T., Clara, I., & Yu, N. B. (2005). Perceived need for mental health treatment in a nationally representative Canadian sample. *Can J Psychiatry*, 50 (10), 643-651.
- Shaffer, H. (1991). Toward an epistemology of "addictive disease". *Behavioural Sciences and the Law*, 9, 269-286.
- Shaffer, H. J., & Jones, S. B. (1989). *Quitting cocaine: The struggle against impulse*. Lexington, MA: Lexington Books.
- Shaffer, H. J., & Robbins, M. (in press). Manufacturing multiple meanings of addiction: Time-limited realities. *Contemporary Family Therapy: An International Journal*, 13, in press.
- Shaffer, P. A., Vogel, D. L., & Wei, M. (2006). The mediating roles of anticipated risks, anticipated benefits, and attitudes of the decision to seek professional help: An attachment perspective. *Journal of Counselling Psychology*, 53 (4), 442-452.
- Sherbourne, C. D. (1988). The role of social support and life stress in use of mental health services. *Social Science and Medicine*, 27, 13-93-1400.
- Sirey, J., Bruce, M., Alexopoulos, G., Perlick, D., Raue, P., Friedman, S., et al. (2001). Perceived stigma as a predictor of treatment discontinuation in young and older outpatients with depression. *American Journal of Psychiatry*, 158, 479-481.
- Sladden, M. J., & Thomson, A. N. (1999). An evaluation of surveillance system for patients discharged from the acute psychiatry unit in southern Tasmania. *Australian and New Zealand Journal of Psychiatry*, 33, 385-391.
- Solomon, P., Davis, J., & Gordon, B. (1984). Discharged state hospital patients characteristics and use of aftercare: Effect on community tenure. *American Journal of Psychiatry*, 141, 1566-1570.
- Sorvaniemi, M., & Hintikka, J. (2005). Recorded psychiatric comorbidity with bipolar disorder – A Finnish hospital discharge register study. *Nordic Journal of Psychiatry*, 59(6), 531-533.
- Stark, M., Campbell, B., & Brinkerhoff, C. (1990). Hello, may we help you? A study of attrition prevention at the time of the first phone contact with substance-abusing clients. *American Journal of Drug and Alcohol Abuse*, 16, 67-76.
- Statistics Canada. (1999). National population health survey, cycle 2 – Residents of health care institutions. *The Daily*. Retrieved May 15, 2007, from <http://www.statcan.ca/Daily/English/990625/d990625d.htm>

- Statistics Canada. (2001-2002). Mental Health and well-being, Health services performance and utilization. Retrieved July 5, 2008, from <http://www40.statcan.ca>
- Statistics Canada. (2002). *Mental health and well-being survey*. Canadian Community Health Survey. Ottawa.
- Statistics Canada. (2004). *Canadian Centre on Substance Abuse*. Canadian Addiction Survey. CAS. Ottawa.
- Steele, L., Dewa, C., and Lee, K. (2007). Socioeconomic status and self-reported barriers to mental health service use. *The Canadian Journal of Psychiatry*, 52, 201-206.
- Stuart, G., & Laraia, M. (2001). *Principles and practice of psychiatric nursing* (7<sup>th</sup> ed.). St. Louis: Mosby.
- Thommasen, H.V., Thommasen, C., Martiquet, P., & Jin, A. (2004). Causes of death among Status Indians and other people living in the Bella Coola Valley local health area, 1987-2001. *BC Medical Journal*, 46, 179-187.
- Thyer, B. A. (2002). Popper, positivism, and practice research: A response to Munro. *Journal of Social Work Education*, 38 (3), 471-474.
- Timko, C., Chen, S., Sempel, J., & Barnett, P. (2006). Dual diagnosis patient in community or hospital care: one-year outcomes and health care utilization and costs. *Journal of Mental Health*, 15(2), 163-177.
- Trattner, W. I. (1999). *From poor law to welfare state: A history of social welfare in America* (6<sup>th</sup> ed.). New York: Free Press.
- United States Department of Health and Human Sciences. (2005, January 31). *Substance Abuse and Mental Health Services Administration*. Author. Retrieved July 17, 2006, from [www.samhsa.gov/news/newsreleases/050131nr\\_TIP42.htm](http://www.samhsa.gov/news/newsreleases/050131nr_TIP42.htm).
- Vogel, D. L., Wade, N. G., & Haake, S. (2006). Measuring the self-stigma associated with seeking psychological help. *Journal of Counselling Psychology*, 53, 325-337.
- Vogel, D. L., Wade, N. G., Hackler, A. H. (2007). Perceived public stigma and the willingness to seek counseling: The mediating roles of self-stigma and attitudes toward counseling. *Journal of Counselling Psychology*, 54 (1), 40-50.

- Waddell, C., McEwan, K., Hua, J., & Shepherd, C. (2002). *Child and youth mental health: Population health and clinical service considerations*. Mental Health Evaluation & Community Consultation Unit. Vancouver, BC: University of British Columbia.
- Winston, A., Pardes, H., Papernick, D., & Breslin, L. (1977). Aftercare of psychiatric patients and its relation to rehospitalization. *Hospital and Community Psychiatry*, 28, 118-121.
- Wivell, R., & Webb, S. (1995). Choosing a counsellor: An exploratory case study. *New Zealand Journal of Counselling*, 17, 35-44.
- Wong, M. T., & Tye, C. (2005). Low hospital inpatient readmission rate in patients with borderline personality disorder: A naturalistic study at Southern Health, Victoria, Victoria. *Australian & New Zealand Journal of Psychiatry*, 39, 607-611.
- World Health Organization. (1994/2006) tenth revision. *International statistical classification of diseases and related health problems*. WHO/DIMDI. Retrieved from <http://www.who.int/classifications/apps/icd/icd10online/>. January 18, 2008.
- Wright, R. (2006). Social support and health outcomes in a multicultural urban population. *Social Work in Health Care*, 43(4), 15-28.
- Young, A. S, Chinman, M. J., Cradock-O'Leary, J. A, Sullivan, G., Murata, D., Mintz, J., et al. (2005). Characteristics of individuals with severe mental illness who use emergency services. *Community Mental Health Journal*, 41 (2), 159-167.

## APPENDIX A

### *Glossary*

### *Glossary*

The following section provides a list of key mental illness and/or addictions terminology and concepts that relate to the research study, including vocabulary used by the Ministry of Health and other cited references.

#### *Acute Care Hospital*

Hospitals where individuals are admitted when they are in the acute treatment stage of their addiction or mental illness disorder and the treatment plan is stabilization. This facility could be a medical hospital or a specialized psychiatric ward (Stuart & Laraia, 2001).

#### *Hospital Management Information System (HMIS)*

This is the source of the information on the acute care clients who are identified through a hospital data system and along with the physician's coding system on whether the treatment was for either a mental or addictions illness.

#### *Hospital Separation*

A "hospital separation" is a single occurrence and not a specific individual, as one person could have several hospitalization occurrences. It is defined as "the departure of an inpatient from hospital, either due to a discharge or death ... hospital separation records are completed by hospitals for each patient who is discharged or dies in the hospital ... and provide the data on relative frequency of a disease and the trends in morbidity from it" (CIHI, b, 2005, p. c-2).

*International Classification of Diseases (ICD Codes)*

The ICD diagnostic codes are used by treating hospital physicians and are from coding systems (ICD 9 and ICD10) used internationally by physicians for medical conditions and medication-induced disorders. These ICD 9 and ICD 10 categories match the Diagnostic and Statistical Manual of Mental Disorders DSM-IV-TR (2000) text revision classifications that are used primarily by North American psychiatrists (APA, 2000). The International Statistical Classification of Diseases and Related Health Problems (ICD Codes) classifies disease, mental illness and health problems to provide information for clinical purposes as well as national mortality and morbidity statistics (World Health Organization (1994/2006)).

*Meditech*

Meditech is an American Health Care computer system used by a number of Health Authorities including Interior Health. It is an electronic client chart that contains a wide range of medical information on clients, one module of which contains mental health information. This IT system links to the Ministry of Health data base through the data collection “Minimum Reporting Requirements” (MRR) system (Information Resource Management, 2005).



### *Mental Health*

“Mental health” is a wellness term that has been defined as “the capacity of each and all of us to feel, think and act in ways that enhance our ability to enjoy life and deal with the challenges that we face” (Government of Canada, 2006, p. 2).

### *Mental Illness*

“Mental illness” is a condition that is defined as “characterized by alterations in thinking, mood, or behaviour or some combination thereof associated with significant distress and impaired functioning” (Government of Canada, 2006, p. 2).

### *Ministry of Health Goals*

The Performance Agreement states the goals of the Ministry of Health are to encompass excellent quality patient-centred care, improve health and wellness for British Columbians, and provide a sustainable, affordable public health system. The roles of the Health Authorities are to identify the needs of local populations, plan and provide services to the public in accordance with legislation and Ministry policy (Ministry of Health, 2005).

### *Performance Agreement*

Following the “regionalization” of the British Columbia health care system in December 2001 (when the current Health Authorities structure was formed) the Ministry of Health began annual “Performance Agreements” with each of the six Health Authorities to improve operations and outcomes of the health services

provided in the province. The purpose of these agreements is to set out mutual understandings of the respective obligations and expectations of the parties and to define the performance targets or deliverables for which each health authority is accountable (Ministry of Health, 2005).

### *Performance Dimensions*

Adult Mental Health and Addictions Services programs in the Health Authorities are measured on three of seven performance dimensions. These are: Accessibility (5.1), Effectiveness (5.2), and Finance, Efficiency and Affordability (5.3) (British Columbia, Performance Agreement, 2005). The primary focus of objective 5.1 is to “improve integration of health care providers, processes and systems to allow individuals to move seamlessly through the system” (Ministry of Health, Performance Agreement, 2005, p. 11).

### *Performance Measure (5.1)*

The Ministry of Health (2005) definition for Performance Measure (5.1) is:

The number of persons aged 15 to 64 years hospitalized for mental health and/or addictions diagnoses that received at least one contract with a community mental health centre, fee-for-service psychiatrist or general practitioner within 30 days of discharge as a percentage of the total number of persons aged 15 to 64 years hospitalized for mental health and/or addictions diagnoses (Ministry of Health, Interior Health - Performance Agreement, 2005, p. 14).

## APPENDIX B

*Broad Diagnostic Categories and International Statistical Classification of Diseases  
and Related Health Problems (ICD Codes)*

Broad Diagnostic Categories and the International Statistical Classification of  
Diseases and Related Health Problems (ICD Codes)

*Anxiety Disorders, Depression, and Disorders with Early Onset*

F32.1	Moderate depressive episode
F32.2	Severe depressive episode without psychotic symptoms
F32.3	Severe depressive episode with psychotic symptoms
F32.9	Depressive episode, unspecified
F33.0	Recurrent depressive disorder, current episode mild
F33.1	Recurrent depressive disorder, current episode moderate
F33.2	Recurrent depressive disorder, current episode severe without psychotic symptoms
F33.3	Recurrent depressive disorder, current episode severe with psychotic symptoms
F33.8	Other recurrent depressive disorders
F33.9	Recurrent depressive disorder, unspecified
F34.1	Dysthymia
F38.1	Other recurrent mood [affective] disorders
F38.8	Other specified mood [affective] disorders
F39	Unspecified mood [affective] disorder
F41.0	Panic disorder [episodic paroxysmal anxiety]
F41.2	Mixed anxiety and depressive disorder
F41.8	Other specified anxiety disorders
F41.9	Anxiety disorder, unspecified
F44.8	Other dissociative [conversion] disorders
F44.9	Dissociative [conversion] disorder, unspecified
F45.0	Somatization disorder
F45.1	Undifferentiated somatoform disorder
F63.9	Habit and impulse disorder, unspecified
F84.0	Childhood autism
F90.0	Disturbance of activity and attention
F91.0	Conduct disorder confined to the family context
F91.3	Oppositional defiant disorder
F91.8	Other conduct disorders
F91.9	Conduct disorder, unspecified
F92.8	Other mixed disorders of conduct and emotions
F94.0	Elective mutism
F94.1	Reactive attachment disorder of childhood

*Development and Organic (Brain) Disorders*

- F01.1 Multi-infarct dementia
- F01.9 Vascular dementia, unspecified
- F03 Unspecified Dementia
- F06.8 Other specified mental disorders due to brain damage and dysfunction and to physical disease
- F07.2 Postconcussional syndrome

*Eating Disorders*

- F50.0 Anorexia nervosa
- F50.2 Bulimia nervosa
- F50.8 Other eating disorders

*Personality Disorders*

- F60.2 Dissocial personality disorder
- F60.3 Emotionally unstable personality disorder
- F60.7 Dependent personality disorder
- F60.8 Other specific personality disorders
- F60.9 Personality disorder, unspecified

*Psychoses and Bipolar Disorders*

- F20.0 Paranoid schizophrenia
- F20.1 Hebephrenic schizophrenia
- F20.3 Undifferentiated schizophrenia
- F20.5 Residual schizophrenia
- F20.8 Other schizophrenia
- F20.9 Schizophrenia, unspecified
- F21 Schizotypal Disorder
- F22.0 Delusional disorder
- F22.8 Other persistent delusional disorders
- F23.2 Acute schizophrenia-like psychotic disorder
- F23.3 Other acute predominantly delusional psychotic disorders
- F23.9 Acute and transient psychotic disorder, unspecified
- F25.0 Schizoaffective disorder, manic type
- F25.1 Schizoaffective disorder, depressive type
- F25.2 Schizoaffective disorder, mixed type
- F25.9 Schizoaffective disorder, unspecified
- F28 Other Nonorganic psychotic disorders
- F29 Unspecified Nonorganic Disorder
- F30.0 Hypomania
- F30.9 Manic episode, unspecified

- F31.0 Bipolar affective disorder, current episode hypomanic
- F31.1 Bipolar affective disorder, current episode manic without psychotic symptoms
- F31.2 Bipolar affective disorder, current episode manic with psychotic symptoms
- F31.3 Bipolar affective disorder, current episode mild or moderate depression
- F31.4 Bipolar affective disorder, current episode severe depression without psychotic symptoms
- F31.6 Bipolar affective disorder, current episode mixed
- F31.8 Other bipolar affective disorders
- F31.9 Bipolar affective disorder, unspecified

### *Substance Use Disorders*

- F10.0 Mental and behavioural disorders due to use of alcohol
- F10.1 Mental and behavioural disorders due to use of alcohol, harmful use
- F10.2 Mental and behavioural disorders due to use of alcohol, dependence syndrome
- F10.3 Mental and behavioural disorders due to use of alcohol, withdrawal state
- F10.4 Mental and behavioural disorders due to use of alcohol, withdrawal state with delirium
- F10.5 Mental and behavioural disorders due to use of alcohol, psychotic disorder
- F10.6 Mental and behavioural disorders due to use of alcohol, amnesic syndrome
- F10.7 Mental and behavioural disorders due to use of alcohol, residual and late-onset psychotic disorder
- F10.8 Mental and behavioural disorders due to use of alcohol, other mental and behavioural disorders
- F11.1 Mental and behavioural disorders due to use of opioids, harmful use
- F11.3 Mental and behavioural disorders due to use of opioids, withdrawal state
- F11.4 Mental and behavioural disorders due to use of opioids, withdrawal state with delirium
- F12.1 Mental and behavioural disorders due to use of cannabinoids, harmful use
- F12.5 Mental and behavioural disorders due to use of cannabinoids, psychotic disorder
- F12.6 Mental and behavioural disorders due to use of cannabinoids, amnesic syndrome
- F12.7 Mental and behavioural disorders due to use of cannabinoids, residual and late-onset psychotic disorder
- F13.2 F13 Mental and behavioural disorders due to use of sedatives or

- hypnotics, dependence syndrome
- F14.0 Mental and behavioural disorders due to use of cocaine
- F14.1 Mental and behavioural disorders due to use of cocaine, harmful use
- F14.2 Mental and behavioural disorders due to use of cocaine, dependence syndrome
- F14.3 Mental and behavioural disorders due to use of cocaine, withdrawal state
- F14.4 Mental and behavioural disorders due to use of cocaine, withdrawal state with delirium
- F14.5 Mental and behavioural disorders due to use of cocaine, psychotic disorder
- F14.8 Mental and behavioural disorders due to use of cocaine, other mental and behavioural disorders
- F15.0 Mental and behavioural disorders due to use of other stimulants, including caffeine
- F15.2 Mental and behavioural disorders due to use of other stimulants, including caffeine, dependence syndrome
- F15.5 Mental and behavioural disorders due to use of other stimulants, including caffeine, psychotic disorder
- F16.0 Mental and behavioural disorders due to use of hallucinogens
- F19.1 Mental and behavioural disorders due to multiple drug use and use of other psychoactive substances, harmful use
- F19.2 Mental and behavioural disorders due to multiple drug use and use of other psychoactive substances, dependence syndrome
- F19.3 Mental and behavioural disorders due to multiple drug use and use of other psychoactive substances, withdrawal state
- F19.4 Mental and behavioural disorders due to multiple drug use and use of other psychoactive substances, withdrawal state with delirium
- F19.5 Mental and behavioural disorders due to multiple drug use and use of other psychoactive substances, psychotic disorder
- F19.6 Mental and behavioural disorders due to multiple drug use and use of other psychoactive substances, amnesic syndrome

#### *Other Mental Health Problems*

- F05.8 Delirium, not induced by alcohol and other psychoactive substances, other delirium
- F05.9 Delirium, not induced by alcohol and other psychoactive substances, delirium, unspecified
- F43.0 Acute stress reaction
- F43.1 Post-traumatic stress disorder
- F43.2 Adjustment disorders
- F43.9 Reaction to severe stress, unspecified
- F53.0 Mild mental and behavioural disorders associated with the puerperium, not elsewhere classified

- F53.1 Severe mental and behavioural disorders associated with the puerperium, not elsewhere classified
- F68.1 Intentional production or feigning of symptoms or disabilities, either physical or psychological [factitious disorder]
- F99 Mental disorder, not otherwise Unspecified.
- R41.0 Disorientation, unspecified

World Health Organization. (1994/2006)



## APPENDIX C

*University of Northern British Columbia's Ethics Approval*

# UNIVERSITY OF NORTHERN BRITISH COLUMBIA

## RESEARCH ETHICS BOARD

---

### MEMORANDUM

**To:** Elsa Felker  
**CC:** Bruce Bidgood  
**From:** Henry Harder, Chair  
Research Ethics Board  
**Date:** July 11, 2006

**Re: E2006.0710.080**

After discharge from hospital, Where do we go? – community follow-up of mental health and addictions patients, 30 day post acute care discharge

---

Thank you for submitting the above-noted research proposal to the Research Ethics Board. Your proposal has been approved.

We are pleased to issue approval for the above named study for a period of 12 months from the date of this letter. Continuation beyond that date will require further review and renewal of REB approval. Any changes or amendments to the protocol or consent form must be approved by the Research Ethics Board.

Good luck with your research.

Sincerely,

Henry Harder

## APPENDIX D

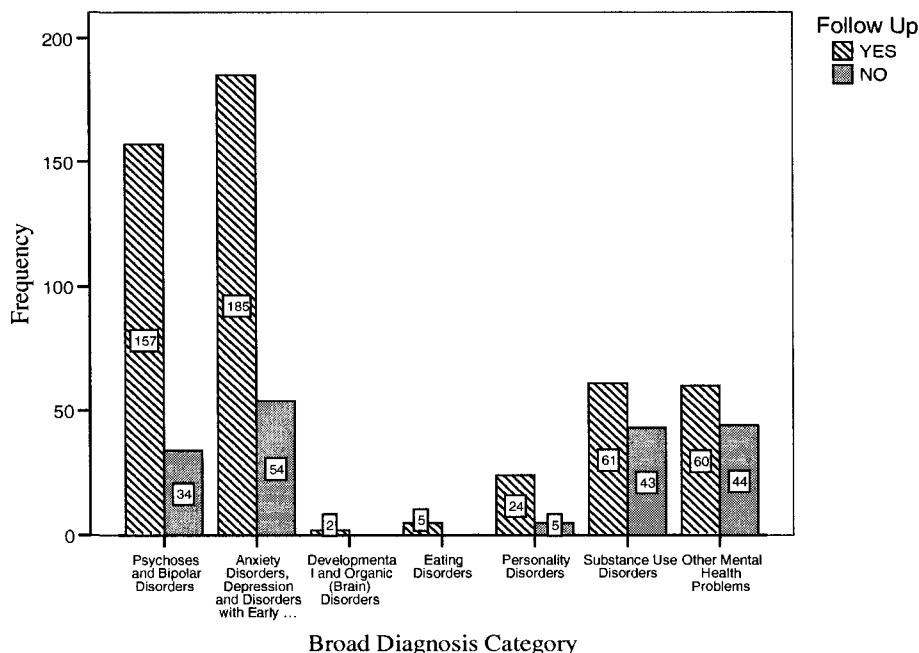
*Broad Diagnostic Categories and Follow-up for Specific Hospitals in the  
Thompson Cariboo Shuswap – Health Service Area*

*Broad Diagnostic Categories versus Follow-up for Specific Hospitals*

Data analysis on broad diagnostic categories and follow-up patterns is carried out for the eight hospitals in the Thompson Cariboo Shuswap area. The hospitals with the highest separations are: Royal Inland Hospital (Kamloops), Nicola Valley Health Centre (Merritt), 100 Mile District General Hospital (100 Mile House), and Cariboo Memorial Hospital (Williams Lake). The remaining hospitals Queen Victoria Hospital (Revelstoke), Shuswap Lake Hospital (Salmon Arm), Lillooet Hospital and Health Centre, and Dr. Helmcken Hospital (Clearwater) have follow-up proportions for the broad diagnostic groups listed below.

The results reveal there are 645 separations from Royal Inland Hospital (Figure 9) with the highest frequency for the diagnostic category of anxiety disorders, depression, and disorders with early onset; second for psychoses and bipolar disorders; third for substance use disorders; and fourth for other mental health problems. Anxiety disorders, depression, and disorders with early onset has a follow-up of 185 (77.4%) of 239, and psychoses and bipolar disorders has a follow-up of 157 (82.2%) of 191. The lowest percentage of follow-up includes the diagnostic group category of substance use disorders at 61 (58.7%) of 104, and other mental health disorders at 60 (57.7%) of 104. There are five hospital separations for eating disorders and two for organic (brain) disorders. Both of these diagnostic groups show (100%) follow-up.

Figure 9. Broad Diagnostic Categories for Clients Discharged from Royal Inland Hospital.



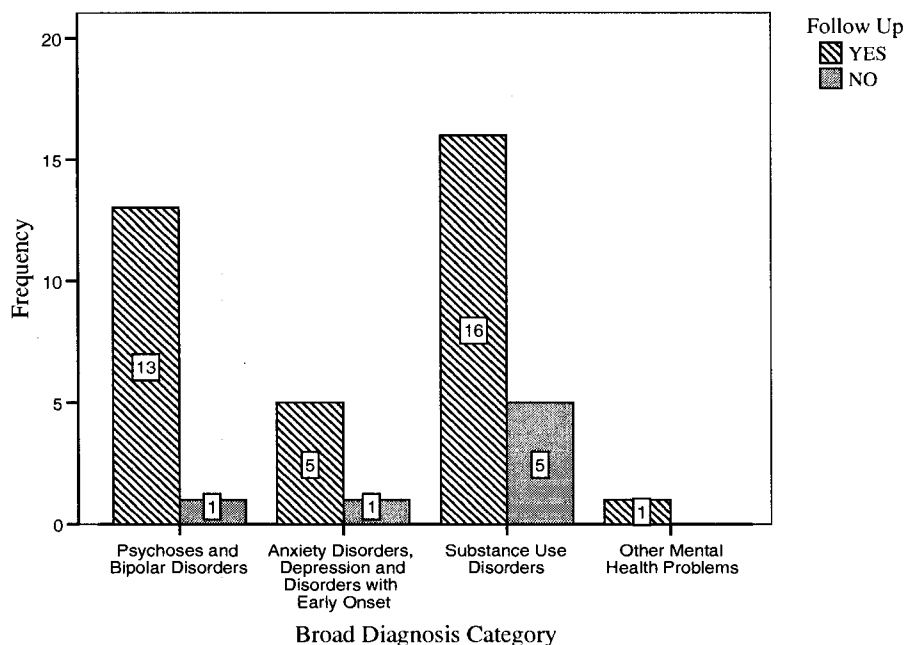
Nicola Valley Hospital has 50 separations across five diagnostic categories for acute inpatients with a follow-up percentage of 42 (84.0%). Individuals with developmental and organic (brain) disorders frequencies of two, and other mental health problems show frequency of five with a follow-up of 100%. The highest category of follow-up for diagnostic groups includes anxiety disorders, depression, and disorders with early onset at 18 (85.7%) of 21. People with psychoses and bipolar disorders have a follow-up of nine (81.8%) of 11, whereas individuals with substance use disorders have a follow-up of eight (72.7%) of 11.

100 Mile Hospital had an overall follow-up of 39 (84.8%) of 46 separations. The follow-up and percentage for anxiety disorders, depression, and disorders with early onset is 18 (94.7%) of 19; substance use disorders at 11 (78.5%) of 14; and

other mental health problems at five (71.4%) of seven. Psychoses and bipolar disorders have the highest follow-up of five (100%) of five, and developmental and organic (brain) disorders presented one separation and no follow-up.

Figure 10 illustrates Cariboo Memorial Hospital (CMH) follow-up of 35 (83.3%) of 42. CMH has follow-up of 13 (92.8%) of 14 separations for psychoses and bipolar disorders; and follow-up for anxiety disorders, and depression, and disorders with early onset were five (83.3%) of six. There were 21 occurrences with substance use and 16 (76.2%) clients have 30-day follow-up. Other mental health problems show one separation with follow-up.

*Figure 10.* Broad Diagnostic Categories for Clients Discharged from Cariboo Memorial Hospital.



Comparing Nicola Valley Hospital, with follow-up of 42 (84.0%) of 50, with 100 Mile Hospital at a follow-up number of 39 (84.8%) of 46, and Cariboo Memorial Hospital with a follow-up number of 35 (83.3%) of 42 revealed all three hospitals exhibit similar proportions overall follow-up and diagnostic category groups. Queen Victoria Hospital has a total follow-up of 25 (78.1%) of 32 hospital separations. Analysis revealed 14 hospital separations for anxiety disorders, depression, and disorders with early onset with a 12 (85.7%) follow-up. The lowest frequency is four for other mental health problems with two (50%) following-up.

Shuswap Lake Hospital had a total of 30 separations for mental illness and/or addiction with 27 (90 %) following-up. The highest number of hospital separations are for anxiety disorders, depression, and disorders with early onset with 10 (90.9 %) of 11 receiving follow-up. Lillooet Hospital and Health Centre has a total of 18 separations, with 11 (61.1%) showing for their follow-up. Substance use disorders have the highest number of hospital separations with five (50 %) of 10 receiving follow-up. Dr. Helmcken Hospital (Clearwater) had two diagnostic categories; psychosis and bipolar disorders with one hospital separation showing (100%) follow-up, and secondly substance use disorders with all three hospital separations receiving follow-up.

Royal Inland Hospital (RIH) serves the greatest population and has the largest number of separations, followed by Nicola Valley Health Centre, 100 Mile District General Hospital, and Cariboo Memorial Hospital.